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## Comment

COMPARISONS are often said to be odious. But they also prove on occasion to be illuminating.

Our Society held its most successful annual conference thus far during the same week that the National Association of Manufacturers was holding its annual meetings. For every inch of newspaper attention we had, the NAM had at least a column. For every prominent speaker we heard, they heard several. Their constituency is industrial executives of the highest rank—largely presidents and vice-presidents. Our constituency is a mixture of highest, high and lower executives, professional people, consultants and teachers. They issued a platform on industrial relations. We did not. But several of our members recalled that this platform was in certain respects less “advanced” than a comparable “Industrial Code” submitted to American industry by a committee of the Taylor Society (one of our parent societies) back in 1931.

The point of these comparisons is not to raise questions of praise or blame. Unquestionably the NAM speaks officially for top American industrial management and ownership in a way that our Society neither can nor can hope to.

But it may not unfairly be suggested that we do speak for, give voice to and offer a forum for, the advance guard of management thinkers who are exploring and experimenting on the frontiers of management practice. Our programs and our publications are deliberately catholic and inclusive in their selection of subject matter within the given field.

And the one problem here posed is: How can we make our pioneering efforts—when they have proved their soundness—more quickly and fully felt into larger areas? How can we avoid the danger of being a cult and how can we more aggressively assume the rôle of a missionary society for better management?

We believe that industry certainly could profit in every way by an extension of our type of thinking, planning and acting. But are we clear enough as to precisely how “our type” of effort can be stated verbally in ways which can be imparted as objectives, purposes, points of view, procedures and methods?

Isn't there need of reformulation on these points in the management movement if they are to be appealingly extended?

Our influence and our general attitude (however undefined this may seem) are now important enough as our recent conference showed, for them to become rapidly far more important and widespread.

Should this next few months perhaps be devoted to, first, a reformulation of objectives, and second, an aggressive plan of action to extend the number of members in order to support these policies in ever widening areas of influence?

# Some Advice to Labor Unions<sup>1</sup>

By MORRIS L. COOKE

Industrial Engineer, Philadelphia

I AM very happy tonight for three reasons. One is to see the vitality of this organization as evidenced by this representative group; second, because I see so many valued compatriots, shall I call them, of past years in the management movement; and third, because of the fact that you have here tonight, and you have had throughout the meetings, a goodly percentage of young men upon whose work the future depends as some of the rest of us pass on the torch.

The program throughout the various sessions has reflected the current nation-wide interest in industrial relations. But I note that except for one session where the problems of union plants were discussed, there has been no mention of labor unions. And no worker, much less a representative of union labor, has appeared on the program.

It reminds me of a memorial meeting to Mr. Taylor held at the University of Pennsylvania shortly after his death. One of the significant contributions was a message from, I think he was then Justice Brandeis, in which he said that it was rather sad that after all the effort that we had individually and collectively put into industry, a meeting of that kind could be held without some spokesman representing organized labor.

I am going to discuss labor unions tonight as one of the increasingly important factors in industry.

Part of the traditions of this Society, certainly of the Taylor Society, is to consider the organization of labor as an essential factor in industry. The works and writings of Bruere, Goodell, Person, Valentine, van Kleeck, Wolf, and even of Taylor himself, attest this.

It is a great mistake for anyone brought up outside of the labor movement to assume that he can fully sense the basis for labor's reactions to industrial moves and situations. The form of security, the wage earnings, gives birth to both a sensitiveness—and a graciousness

*The labor union is one of the increasingly important factors in industry. Upon its leadership and the true exercise of its functions, depend in a large measure the future well-being of American industry.*

—hard for those to grasp who have not been through that mill.

## Labor's Graciousness

Just before I left Washington in the Fall of '36, I was called up by the president of the Cincinnati Gas and Electric Company, during the midst of the Ohio floods. Several electric storage batteries which had been completed for his company and were ready to be shipped had been held up by a sit-down strike in Philadelphia. On account of the flood the electric stations needed them very badly. After explaining the situation he said to me, "Could you put the government on this and get these batteries loose?"

I said to him, "Well, I can't do that. That isn't the kind of thing the government likes to do." But I happened to have some friends in Philadelphia, my home town, so I tried to help him out.

At nine o'clock the next morning, the sit-down strikers voted unanimously to ship the storage batteries. Then they went to the head of the union in the city and said, "Do we charge for the work on those batteries? If so what will we do with the money?" They knew they couldn't give it to the particular men who had worked on these batteries when they were all sitting down. The head of the union said, "Charge at regular rates and put the money in your union treasury."

Just recently, I heard that they had not done that but had sent the five hundred-odd dollars to the Red Cross. That is what I mean by graciousness.

## Labor's Function

When I speak about the functions of organized labor in management and the conduct of labor unions, I am thinking out loud, hardly even giving advice. We don't boss the bosses for whom we work, so we can hardly expect to boss the unions. We cannot afford to be dogmatic about anything until we have had the opportunity

<sup>1</sup> Paper presented at the Annual Dinner of The Society for the Advancement of Management, New York, December 9, 1937.

to discuss with those who may hold different views and are entitled to hold those views, if they so desire, all our wisdom and cocksureness to the contrary notwithstanding.

I think the term "management and men" quite misleading as those of you who have ever read me fully realize. We must look upon men and women of all grades in industry as a part of management. This integrated group, by working harmoniously and effectively, pave the way not only for increased earnings, leading to higher wages and a more dependable return on the capital invested, but for a way of life consonant with our heritage.

In 1917, the American Academy of Political and Social Science issued a volume that was jointly edited by two members of this Society, Fred Miller, then President of the American Society of Mechanical Engineers, Samuel Gompers, and myself. It was called "Labor Science and Production." To that volume I contributed a paper entitled, "Who is Boss in Your Shop?" in which I canvassed personnel relations, especially the then novel doctrine of consent and group versus individual action. I believed then as I believe now, both as affecting the individual and the nation, the development of real democracy depends upon utilizing the high power of individual action coupled with all the safeguards that can be erected through appeal, investigation and review and the freest possible publication of results, with the final action based on the judgment of the governed.

In this paper, too, I deprecated committee management and I am sure in an audience such as this, I can get an echo of approval on that.

In December, 1928, at the Annual Meeting of the Taylor Society, in my presidential address which was called "Some Observations on Workers' Organizations," I sought to pour as hot verbal lead on yellow dog contracts as I could. We do not hear so much of yellow dog contracts today. I pointed out what have since been developed as the fatal weaknesses of company unions and advocated the organization of workers into standard unions with industry-wide and nation-wide membership.

#### Suggestions to Unions

Tonight, I want to carry this twenty-year-old (1917-1937) line of thought a little bit further and first suggest to the management of local unions, as contrasted with national unions, several things.

The first move, and I believe in the end it will be

discovered to be the most important perhaps, is the isolation of grievances. At the present time, practically all labor leaders, and I may add practically all industrialists, look upon the union wholly as a mechanism for adjusting grievances. As long as you have this organization set up for the adjustment of grievances and emphasize that, you cannot use it for more constructive purposes such as our colleague Robert Wolf has advocated and demonstrated.

Therefore, I would set the grievances to one side. Have your grievance committee, if you have to have it! But I am led to believe that there are plenty of plants in this country where such a committee would have little to do. However, as long as the unions themselves, abetted by the employers, assume that grievances are the main objective of a labor union, the labor unions will not perform what I take to be their most important function in industry.

Then, these local bodies should demand of their national organizations aid in production matters. I talked with a high-minded labor leader in Philadelphia within the last few weeks. He told me that in one day he had had appeals from workers in macaroni, whiskey and stoves to know what constituted a good day's work. "Well," he said, "I might know how much whiskey they ought to be able to turn out but I couldn't know about macaroni and stoves."

Third, local unions must face the problem of unbalance in wage payments. That is a thing that a number of the members of our Society have worked on from time to time. Sanford Thompson, for instance, did some notable work on that. It is a nation-wide problem. People in one industry are paid out of scale to the people in another industry, that is, without much regard to the relative value of their contribution. American industry will not start going places until some of these injustices are resolved.

Fourth, in every possible way in collective bargaining, avoid voting on facts. There is no use of voting on a fact if it is a fact. It gets you nowhere. Arrange that the vast majority of judgments be rendered by informed individuals.

Take John Smith, a prominent labor leader and discuss with him the propriety of having an operation. He agrees that he will have the operation. From that time on, he wants the informed person, the surgeon, to do the job. If we could just get that idea over to the labor unions, it would be a great and good thing.

As Robert Wolf has said, "The function of the group should be the greatest possible amount of freedom for



the development of the individual." Industrial democracy has forced the collective bargain to act as one check against the excesses of individualism. But we must be careful lest the check be used as some of our political checks have been used, to destroy all chance of positive and strong timely action.

When it comes to the national union organizations there are three things that seem to me to stand out as a program for them over and above what they are doing today. They have got to learn to work for something outside themselves. No individual is cultured, no individual is competent to advise in important matters if he has never interested himself in anything except what has a bearing on his own immediate well being.

Second, they should carry on adult education of a type that we have never seen in this country, perhaps never has been seen in any country. If you can bring out a book, "Mathematics for the Million," and sell a hundred thousand copies of it, why not an "Economics for the Ten Million," showing why labor has more to gain from increased production than any other group?

A good subject for adult education might be the development among union members of a simple garden variety of manners. Somebody said to me recently, "They (the unions) get tough with you over little matters," and you all know that they do. It doesn't get them anywhere. It is good tactics to get rough about important things.

But more important than these things I have mentioned is that organized labor should study production techniques, make possible co-operative production research. Now that we have got our National Labor Relations Board going, and presumably that will be supplemented by other agencies with legal warrant and background, it is going to be quite necessary unless these new procedures are going to become unwieldy, that we engineers, we employers and we workers get together and iron out a lot of these things at the work place, in the shop, in the market, in the nation and just let these agencies that are set up by government do things that only government can do. Let us be men and women and do our part, because if we don't, these agencies are going to break down, and there may result worse chaos than before. Stop running to Washington! Iron these things out at home!

Recently I ran across a quotation which I think is out of a New Zealand government publication of about 1914. Some such board as our National Labor Relations Board had been set up, and these are sample extracts from their rules:

a. If the work required of them is not in accordance with the general custom of the trade, and is not covered by the definition in clause 8 of the award the drivers cannot be compelled to do the loading and unloading.

b. The rate prescribed for a driver of an engine with a cylinder under 12 inches in diameter is 1s. 4½d. per hour. Nothing extra need be paid to a driver who is required to clean windows, etc., but the rate mentioned must be paid in any event.

c. An assistant is an employe other than a pastry cook, packer, apprentice carter, or motor-wagon driver as above defined and who does any or all of the following work, viz: bring in raw material; wash, clean and grease pans, tools, tins, and other utensils; clean and wash machines; label tins and boxes; wash and sugar goods; wrap cans and pastry; crack eggs; clean fruit and cut peel; put on and take off peels; attend reel, traveling and draw-plate ovens, provided that a journeyman is in charge; place goods into and take goods from tins, trays, pans, trucks, racks, bins and cupboards, before, during and after the manufacture; pack goods in bakehouses; clean bakehouses, yards and premises, feed and take from machines, put on and into and take from tins, trays, and pans any goods in any stage of their manufacture; top and bottom pies.

d. Men working in wet places are to be paid 1s. per day extra irrespective of the time so engaged. Note—Such wet places are to be determined and declared to be such by the employer and employe by mutual arrangement. In the event of the parties failing to agree it shall be referred to the chairman of the board for his decision.

Imagine a labor relations board handing out any such rules as that!

In the building trades they are talking about moving from high hourly wages with intermittent employment to guaranteed and reasonable annual compensation. There is a real job for industrial engineers and labor unions and employers. It is unthinkable that the present situation should be allowed to continue.

I talked on this subject to a high labor union leader within the last few days. He said, "Do you think you can stabilize employment in the building trades?" and I said feebly, "Yes, I think something can be done." "Oh, no, it can't," says he. "Well," I said, "you're licked if you start in by saying that it can't be done. Such changes have come in other industries where the situation has been just about as bad as in the building trades. You have difficulties there to overcome of course. But we must assume that that sort of thing should be ironed out, can be ironed out, will be ironed out."

I wish I could get this group interested in standard unions, not as something to be dreaded and fought but in order that whatever we have to contribute to their

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# Where Do We Go From Here?<sup>1</sup>

By GEORGE T. TRUNDLE, JR.

President, The Trundle Engineering Co., Cleveland

ECONOMISTS and political observers all around us are diagnosing the current recession of business

as a symptom of domestic incompatibility, justifying a legal separation, if not the absolute divorce, of government controls from private industry. After all, theirs was a shot-gun wedding—and such matches seldom lead to happy married life. If the first essential, mutual trust and affection, is lacking, emergency conditions of the moment don't seem to make much difference in the end.

Many reasons are being given by business for the recession; some single out unfair labor legislation; others shout about restrictive business controls. All protest against excessive taxes too long hidden from the folks who really pay them. Our law-makers in session at Washington have their ears to the ground, and are seeking constructive help. Labor is beginning to pull its punches, probably realizing that unless it does, there will be little left to punch. However, the three major characters, labor, business and government, are still far apart because they lack a common understanding.

## Responsibility of S. A. M.

In the midst of all this, where do we stand? If we, The Society for the Advancement of Management, with all our members, have any right to exist, that right imposes a real responsibility at times like these. As a neutral in the industrial scheme—a body whose job it is to compose the differences which stand in the way of progressive industrial advancement—we have a real task cut out for us.

With federal, state and local governments extending their lines on one side of the economic triangle and labor lined up on the second, we find industry hemmed in at the base and the public in the middle. It should be obvious that if government functions are extended on one side and wages on the other, the public must accommodate itself to life within an increasingly restricted triangle unless the third side of the triangle is likewise extended in a normal way.

## *What is the function in a democratic economy of a Society like ours?*

Until these factors—government authority and taxes, the wages and productivity of labor, and the incentives and opportunities for industrial development—are adjusted to a normal balance, sound national growth will be difficult, if not impossible. We enjoy an enviable opportunity to help restore that balance—embracing as we do representatives of industry, of government, and objective thinkers, educators and social workers whose first concern is the general public welfare.

With no one's axe to grind and just about as many different viewpoints as can be found within the framework of a well-ordered, law-abiding, industrial nation, we can evaluate all the problems and should command an audience. This cannot be done by crying out against the burdens placed on industry. It is a fact-finding job which requires the assembling of all the pertinent data and its formulation in such a way as to win the ear of government and labor organizations, as well as business and industry.

## Labor's Problems

Let us take the problems presented by labor. Organized labor in its entirety, embraces both responsible and irresponsible unions, some led by level-headed and far-sighted men, the others by self-seekers, and radicals. Organization of workers as such is certainly just as reasonable as it is between individual businesses whose organizations play an important part in national industrial life. If any group in industry still fails to recognize that the equities demand that labor enjoy the same rights of association, we have a job to do. The certain task, however, is with respect to the character of organization which will lead labor farthest without upsetting the industrial apple cart.

What could be more helpful toward the establishment of industrial harmony than an intelligent explanation and defense of labor's right to organize, which also emphasizes the responsibilities of labor for the preservation of American institutions? The facts and figures quickly show that with wages and prices in proper economic balance the worker is both the producer and the cus-

<sup>1</sup> Address at the Annual Dinner of The Society for the Advancement of Management, New York, December 9, 1937.

tomers whose contributions do more than anything else to keep our standards of living on a constant upgrade. Individuals, with such proof before them, would be real protection against labor agitators whose primary function has been to arouse opposition to our capitalistic system, which undermines the opportunities for co-operative national growth.

#### **The Problems of Government**

When it comes to government, the job is still more difficult. The limits of this job can be seen today by reading the news from Washington. Congress is making haste slowly toward the revision of those laws which all agree are primary impediments to the resumption of business. We cannot for a moment put the blame upon our elected Senators and Congressmen, for to this date business and industry have not crystallized their views on how to remedy recent Congressional mistakes.

Everyone knows that the Social Security Act must be amended, but has any representative group which is above suspicion (as the spokesman of special interests) yet suggested how it should be changed? If we will but canvass our members and assign competent analysts to the task of resolving their views, The Society for the Advancement of Management can place them before Congress as sound, unbiased and plausible.

The same applies to the Undistributed Surplus Profits Tax, which, while it must be thoroughly revised, cannot be kicked overboard without some alternate income measure.

Let us find out from our members what they want and need; what governmental controls are interfering with normal business progress; how federal spending can be made to mesh with private industry in the interests of general recovery. Until we, as a representative and neutral body, have found out, formulated our opinions and communicated our observations to the proper parties, we have not done our duty. Certainly we should be in a position to be listened to as a group whose members know a great deal about all these problems from many different angles.

#### **Industrial Problems**

Quite apart from these legislative questions are the purely industrial problems of establishing sound price

structures, budget controls, and selling methods. In each of these much can be gained by the study of composite as well as individual experience. Many manufacturers, in budgeting expense, assume that there is just one way to reduce costs—by getting more from labor at low wages. What they fail to see is that so long as the average direct labor cost is but seventeen cents out of every sales dollar and that what is raw material for one company is finished product to another, this reduction really doesn't amount to much. Certainly if they view wages as purchasing dollars to support the general business level and recognizes their small proportion of total business costs, they will think twice before they try to drive wage levels down.

#### **Long-Term Job**

Much as we may hope to accomplish directly, the long-term job is equally important. Our student branches are a real step in this direction, for by sending information and our interpretations concerning tax, labor, or business problems to student chapters for discussion, we will be bringing our views before the college faculties, who, in large measure, shape the thinking of the future generations. Discussing these same subjects with their parents, our student members will give broad circulation to our thoughts and findings.

Once our research is done and our conclusions formulated, our responsibility to inform the public must be recognized. Our work will be for naught if we rely upon our own publications, our members and our student associates to get the word around. The press, the radio, and national periodicals are all open to any neutral group which speaks with authority these days, on political or economic questions. If we but make known our principles and point of view, they will be quick to recognize our Society as one of these neutral groups.

But getting back to our question, "Where do we go from here?" it is my feeling that if we pool the resources and experience at our command for interpretative research into these basic problems, The Society for the Advancement of Management can help chart the national destiny.

# How To Operate Under A Collective Agreement<sup>1</sup>

By MORRIS GREENBERG

Vice-President in Charge of Manufacturing, Hart, Schaffner & Marx, Chicago

**T**O SUCCESSFULLY operate plants these days under collective bargaining requires a philosophy and an approach which recognizes what the fundamental problems are. While methods change and philosophies change, the basic problems which are being attacked by these methods do not change.

A successful system must recognize the needs and requirements of management and workers. These can be stated as a few basic, fundamental requirements.

Management is concerned with the maintenance of an even, satisfactory flow of production, it is concerned with the maintenance of reasonable competitive costs, and with the maintenance of quality; and to help enforce and maintain all these, it is concerned with the right to have disciplinary discretion.

Workers are concerned fundamentally with a fair and decent wage payment plan, under which rates of pay are honestly made, which does not promote speed-up, and a plan under which rates are not arbitrarily changed. Workers are also concerned with security—security of employment, security from arbitrary discharge, security from unfair treatment in the matter of distribution of work in periods of short employment.

Each of these lists can be modified or expanded but most points are covered under them.

In order to meet management's problem, there must first be an analysis of it. The goal must be set, the mechanism developed and then must follow the building up and maintenance of a proper spirit in which to administer the machinery and the philosophy.

It is easy enough, looking at the problem objectively and without having any special circumstances or conditions in mind to set the thing out thus, simply. To do it practically, however, in a newly

*The most important single thing that a management newly entering into a collective bargaining agreement can do—and I cannot emphasize this too strongly—is to develop for itself a really broad, honest, intelligent point of view, and convince and persuade the workers of that fact. It must do the best it can to put the mistakes of the past behind it. The sooner management recognizes this, the better progress will be made in collective bargaining arrangements.*

organized plant, is difficult.

Almost always there is an historical background that has set too many conditions, that has set obstacles that must be overcome. There is unfortunately, too often a period of repair that must be gone through before a period of building can start.

In such a situation, and at such a starting point, the thing that can lay the foundation for successful operation or that

can make success impossible, is the spirit in which both sides, but particularly management, approach the problem.

If management, which has for years been fighting labor, fighting to prevent organization, fighting to maintain advantages that run counter to the interests of labor, comes into such a new relationship with its fingers crossed and with a set of mental reservations, you can look for trouble ahead.

Many are concerned in this matter of the spirit of approach to the problem, with the kind of labor leadership they have to face. Many managements say, "Oh, yes, we would be willing to approach the problem broadly and look only at fundamentals, but look at the leadership we have to deal with. It is interested in small things. It is interested in the wrong things. It does not have vision. It doesn't understand the problem."

Unfortunately, in the beginnings of labor relations that is too often true. In the main, however, the type of leadership that emerges on the part of labor is determined by the attitude and the approach of management. A management can do more to encourage the proper type of leadership by its attitude, by the spirit in which it obviously approaches the problem, than by any other method.

I think in a general way it can be said that management gets the kind of labor leadership it deserves. It is only too easy to see what kind of labor leadership management can expect which enters collective bar-

<sup>1</sup> Paper presented at the Annual Conference of The Society for the Advancement of Management, December 9, 1937.



gaining determined to put over what it can, maintain every advantage it ever enjoyed, and to see what it can get away with.

But good and pious intentions are not enough. Mr. J. H. Williams, the Arbitrator for the first seven years of the Hart, Schaffner and Marx agreement made that clear in a long series of decisions. He worked out and developed this philosophy: The best and most successful relationship can exist only where there is on the one hand a strong, aggressive, and efficient management, which has power and discipline to enforce its just needs, and on the other hand, a strong, well-knit, well-organized union.

That is true in any situation where there has to be a meeting of minds, where one has to deal with representatives of a group of people. A union deputy who speaks only falteringly for his people, who is not at all certain that he can carry out, or get the people to live up to, an arrangement which he makes in their name, is not of much use in any situation. It is in weak unions, badly organized unions, unions in so-called open shops or preferential shops, if you like, where they have to devote a great deal of thought and effort to maintaining their status that such deputies are encountered.

It is primarily in such situations that you find leadership more concerned with small things, things which affect its own petty interests, than with larger, constructive matters.

Of course, it is asking a great deal of a management group which for years had a definite anti-union philosophy, to re-make that philosophy suddenly and completely because of the signing of a collective agreement. But unless they do and until they do, there will be trouble.

In any event, there is required at this early stage of the initiation of collective bargaining arrangements, as careful an analysis as possible of the basic problems of the particular industry, the setting up of machinery designed in the light of the facts of the situation to handle the matters that come up from time to time, and then the development of a proper spirit on the part of the members of management—the foremen, the superintendents, the time keepers, the rate makers and so on—and of an understanding of the system and of the philosophy so that they can administer it in a day-to-day manner in a way best calculated to get good results.

All of this is vague and general. I will try to give it a little more meaning by discussing some of these problems in a more detailed way to show you how they can be met, how a situation which is fraught with all sorts of possibilities for trouble can be so developed that these

troubles are minimized and the best factors in the situation retained and strengthened.

The wage payment plan is such a fundamental problem. The wage payment plan in force must be a fair one, must satisfy the workers as to its fairness, both in the way the rates are set and the way the rates are administered, and must satisfy the management that the rates are fair and competitive and that the system will operate without slighting or hurting the quality of the work.

There are many wage payment plans. We, in our plant for instance, use three. Piece work is used for about 85 per cent of the work. I don't know of any wage payment plan that has been more roundly cursed by both sides, and with more reason, than piece work. All of you who have had experience in rate setting, and are familiar with the philosophies and theories of wage payment plans, know what an instrument for deviltry and damage an unlimited piece work system can be in the hands of an unscrupulous and inefficient management, and what troublesome reactions it gives rise to, or can give rise to, on the part of the workers.

The old method of having rates set by management alone, through the use of pacemakers to ensure that the rates set will be low and require of workers exceptional speed and skill to be able to make any kind of earnings under them, and that force the average workers to a ruinous rate of speed to make any earnings at all, that give rise in self-defense on the part of the workers, to loafing, soldiering and disregard of quality so as to make some kind of earning; the old piece work system that is accompanied by frequent and arbitrary changes of rates on the part of management whenever it feels that the workers are earning too much—that system of piece work can nevertheless, under correct and proper safeguards, be a most efficient and satisfactory wage payment plan.

It is so in our plant, and here is how it has been made safe and practical: Piece rates are set jointly. All piece rates when set are carefully recorded. There is prepared a specification setting forth exactly the quantity and quality of the work covered by the piece rate. In extreme cases, where a written description is not adequate, a sample of the work itself is put on file. The management is given clearly to understand that the sole responsibility for the maintenance of that specification rests with it. The right of discipline to maintain the specification, suspension of workers for failure to do work in accordance with the specification, in extreme

cases the discharge of workers for failure to do the work as specified, rests in the hands of management.

The impartial machinery has again and again not only confirmed actions of discipline taken on the part of the company to promote or enforce the maintenance of quality standards, but has gone farther. In cases where, through lax management, specifications have been allowed to lapse, the impartial machinery has seen to it that the firm is penalized. The firm need not come crying for sympathy to the impartial machinery for failure on its part to enforce its rights.

These decisions and this attitude have done a great deal to make management conscious of its function and of its responsibility in this regard.

This will sound rather peculiar to those people who are skeptical about management's rights of discipline under collective bargaining; that the machinery set up under collective bargaining has had to force management to exercise its rights. But that is the truth. And it has been, incidentally, a most welcome and efficient aid to management.

So we have accomplished two things. We have accomplished the creation in the minds of the workers of a feeling of confidence in the honesty and fairness of the rates. They must feel that way. We have not only maintained but have done a great deal to strengthen the power of management to exact for these rates the quality levels to which it is entitled.

The third fear and bugaboo in respect to piece work on the part of workers, the fear of arbitrary changes in piece rates, is removed because the company cannot change a piece rate. It can bring an action before the impartial machinery for the change of a piece rate, as can the workers, if experience demonstrates that an error has been made, but changes of that kind command confidence and respect.

Here I have given you a sketch of the end results—how the piece work system can look after many years of operation under a system of collective bargaining. Is it possible to effect the same situation earlier in the operation of new collective bargaining arrangements?

Frankly, I don't know. The answer to that could be "Yes" or "No" or "Perhaps." It depends entirely, as I said at the outset, on the spirit in which management approaches the problem. I do believe that if management, newly operating under collective bargaining, can divorce itself from the old conception of the way it operated the piece work system single-handed and can truly and honestly not only adopt the broader

view but persuade the other side that it has adopted the broader view, much can be done early.

The pioneers in collective bargaining, naturally, had to feel their way and made a great many mistakes, and did a lot of things which, if they were starting all over today, they would not do. That is true of both the union and the company.

I know, for instance, that in the beginning, rate making in our company was approached from the management side in a very, very technical spirit. It was met in the same spirit and when it comes to being technical, I will set up a good union committee against any three managements any day.

People frequently say to me, "Don't you often find that under that kind of rate making, the union takes advantage? The union enforces high rates here and there?" Yes, they do. We did find that, but that situation tended to correct itself in this way: A deputy is after all a representative, chosen by votes, and like most people so chosen, has to do what he can to maintain himself in favor with as large a group of his constituency as possible. If a deputy has been successful in putting over a cute trick and getting a nice fat, juicy piece rate for a section, he is very quickly met by other sections saying to him, privately, "Look here, brother, I belong to this union, too. How about doing the same thing for me?"

In a situation where there is an impartial machinery, an established rate structure, and specifications protecting the piece rates, that is a very difficult thing to do to order, and the deputies in our situation, even if the rate making capacity of management had been more limited than it was, would soon have found themselves in a situation where it was to their own best interests to make piece rates that were fair and defensible.

It has tended to work out in that way, not because of any high-minded ideals on the part of the deputies—surely in the early days of our arrangement they were out to get what they could—but because the force of circumstances, the political necessities, the political repercussions of the things they did taught them that for their own interests it was better to have a sound, intelligently balanced rate structure. It removed pressures on them that they did not want to face.

The same thing is true and the same approach is possible with any rate system. I hold no special brief for piece work. But I think if I were organizing a new plant today and had free choice of a payment system, I would choose piece work, if the nature of the industry were such that rate making could be done intelligently.

But there are situations where piece work is not feasible. We had a difficult problem, for example, in our cutting departments where piece work was not practicable. Cutting as it is done in most clothing plants, and in our plant, is a complicated operation. Too many different kinds of work are done by the cutters from day to day, from job to job, to make possible a simple set of rates. Also, there was a bad historical background.

The company in previous days had enforced a system of piece rates. It was an inadequate, badly designed, badly devised system of piece rates and had built up such a terrific resistance to the very idea of piece work that even if it had been practical to set up an intelligent system of piece rates, the antagonism that had been created by the background was too great. And just as the company felt that only piece work could give them the measure of control of production which they wanted, the union felt that only straight hour work or day work without any control of production was the idea.

Incident to a general wage change, about seventeen years ago, I think it was, Professor Tufts met the problem by saying that cutters were to get such and such a percentage of wage increase, a different percentage from the one which was to be given to the rest of the industry, but that for that, there would be set up a system of what he called production standards.

I am very much amused these days when I read about the new discovery in wage payment plans—measured day work—to find that it is nothing but our good old friend, the cutting standards system, with which we have lived now for seventeen years and which was hoary with age when Professor Tufts introduced it. He didn't invent it by any means.

Regardless of its origin, however, it is simply this: The setting up of a set of time measurements for the doing of each of the elements of the work. These time elements were set jointly, partially by time study and partially by recognition of existing opinions on the subject, existing for many years. In cases of dispute they were set by the impartial chairman.

Then the system operates this way: We give a man on every job he does information as to how much time he is allowed for that job under the standard system. His job is timed in and timed out. We do not figure individual jobs, but accumulate four weeks' work and treat it as an entity. We add up those four weeks of work, the total time allowed and the total time consumed and we derive from that a percentage of efficiency. A man who took exactly the amount of time that he was allowed was a hundred per cent man, and so on.

Then this system says that for a hundred per cent, or rather any percentage between 98 and 102, inclusive, the standard wage or scale is paid. For 103 to 108 per cent inclusive, another wage is paid and so on, in brackets of a few percentages at a time.

This begins to look like one of these incentive plans that I think so little of, where a base wage is set for a base production and then above that, there is a production curve that mounts steeply, compensated for by a compensation curve that mounts rather flatly; in other words, you don't pay the workers as much for increased production as it would come to on, say, a piece work system.

In our case it does not work that way. The increased and decreased compensation does only approximately follow the change in production, but with this difference: The men who do a little more than the base get not quite as much money as their increased production entitles them to, but the men who do a little less than the base have deducted from their pay not quite as much as their reduced production would require them to have deducted. The company does not profit in the average.

The impartial machinery says to the company, "You are entitled to get from the entire cutting floor an average production that shall be 100 per cent in return for an average wage scale that shall be 100 per cent." The system was consciously designed in this case to favor the somewhat slower man at the expense of the somewhat faster man. There was a shift within the group.

This was a principle that was understood at the time the rates were set—understood by the union, understood by the company; and concurred in by the union and the company. Of course, there were certain aspects of it in which they did not have much chance to concur, certain aspects that were just written into a decision and which they had to like. But they liked it well enough so that there was no serious trouble.

I used to think this was certainly a hybrid sort of animal. There is nothing like it on the face of the earth. It isn't piece work, it isn't day work, it isn't any definite thing. But it was one thing. It was a conscious and deliberate solution of a definite problem, one that took cognizance of the nature and character of that problem, of its background, of its history, of the psychological blocks and difficulties that were inherent in that situation, and a solution that was worked out practically jointly and that has since been administered jointly, so that today we have no difficulty with it at all.

Strangely enough, as it works out today, it turns out to be substantially a piece work system except that



where in a piece work system rates are expressed in cents per unit, in this system the rates are expressed in minutes allowed per unit of work. It amounts to the same thing because we pay forty-eight dollars a week for 100 per cent performance in thirty-six hours, and that translates itself right back into so much a minute, and any rate in terms of minutes is finally a rate in cents. But it is not called piece work and it is not piece work because it does not operate directly and immediately as piece work operates.

In piece work, a man's pay is in strict accordance with the units he does within the same payroll period. Here, the payroll follows production four weeks later. We make the pay adjustments once a month. For the work done, for instance, in the month of January, there is a wage adjustment on the first of February, operative for the month of February. On the first of the next month, there is another wage change operative for the following month and based on the production of the month immediately preceding. Under this system, it is possible for a man in a month in which production is higher, to be getting a wage that is lower but he knows that he will get the higher wage the following month.

Any problems of wage payment can be worked out like that if they are worked out in the proper spirit and analyzed carefully, the problem reduced to definite and specific elements, and definite and specific provisions made for the handling of each of those elements in a manner mutually satisfactory.

That seems, as I say it, so awfully trite, and yet I have seen not only piece work systems but other wage payment systems, many of them in plants under collective bargaining, that fly directly in the face of what seem to me to be such obvious necessities. I frequently say to myself that the chief ingredient that is lacking in most such cases is just good, common horse sense.

There is one thing that I want you to notice here, how in the settling of one problem, there have been automatically and quietly settled other problems.

In the setting up of a decent wage payment system,—one where there is tied into the making of the rates a definite specification of the work to be done for the rate, with the duty and responsibility of the company clearly established to maintain an exact performance of the quantity and the quality of work for which the rate is set,—you have gone a great part of the way to solving the quality problem.

To the extent that you place the mechanisms for adequate discipline in the hands of management, to enforce the quantitative and qualitative performance of the vari-

out specifications, you have solved the discipline problem.

All of these problems are inter-related. None of them stands alone. And that goes all the way through the entire field.

The maintenance of the proper quantitative level in production raised quite a lot of troubles in the beginning, and here again, as in the case of piece work, the end result was a forcing upon management by the impartial machinery, of a clear recognition of its duties and its obligations, of its part in the maintenance of a decent production level.

The problem of maintaining an even flow of work has been little understood and that is true of both union and non-union plants. In the non-union plants, with the same degree of understanding, less is done about it by management because less pressure is brought to bear on management to do things about it. In the union arrangement, more pressure is brought to bear upon management to do things about it, with the end result that in the long run, everything else being equal—with the same degree of intelligence—management must be better. It is forced in self-defense to be better under a system of collective bargaining.

I will give you in detail an example of how it works. It is obvious that in any system based on the division of labor, to maintain an even flow, the personnel in various sections or groups handling different parts of the work must be balanced. The plant, the equipment, must be available for the handling of the same quantity, and the same quantity of work must be fed to each section per unit of time.

It sounds simple and it seems almost silly to have to say it, but most violations of good management in the matter of maintaining flow of work are violations of just such simple and obvious common sense rules.

If I have a section of tape sewers which has to turn out a thousand units a day and following them is a section of tape fellers who have to fell a thousand tapes a day, and next to them is a section of tape pressers who have to press a thousand tapes a day, it is perfectly obvious that if the tape sewers don't sew a thousand a day, the fellers won't get a thousand to fell, they can't fell what they don't get, and so on down the line. There are blocks in production and blocks in the earning capacity of the people in the sections that are affected.

Under non-union operation, the standard attitude of management on complaints of that kind by workers is, "It's none of your business. We're running this plant. If you don't like it, go work somewhere else." That is

not management, that is an evasion of the problem of management, and a method under which bad management is perpetuated.

Under a collective agreement, however, pressure is brought to bear when the tape fellers come and say, "Look here, you're forcing us to sit around and wait for no fault of our own, you either give us work to do or pay us for waiting time." It forced good management down our throats. We had to be good managers in self-defense.

There has been another interesting development. Many people can see only the negative values in dealing with workers under collective bargaining schemes. They see collective bargaining machinery as a way to avoid trouble, a negative value, and they overlook the positive values. There are definite positive values and in my judgment, they often equal and in some cases outweigh the negative ones.

Here is one of these positive values: Under our system of operation, the girls in the tape felling section watch very carefully the people who come into the section preceding them. The plant starts to work at 8 o'clock, and if by 8:10 or 8:15, there are two or three people absent out of ten or fifteen, they don't wait very long before going to their shop chairman about it. The shop chairman gives the production supervisor a few minutes, a reasonable time, to get around to correcting that break. If within a reasonable time he has not done anything, the chairman calls the matter to the supervisor's attention. At first our management resented this interference with their ancient "rights" but the company has learned to see the positive values in such a system. You can call it co-operation. It is just as much co-operation if its motive is self-interest, as if its motive were something else. The end result is the same.

It goes even farther because now a shop chairman does not only announce that there are two tape sewers missing but he adds "I'm sending over Susie and Mamie. In fact they are over there now. Is that all right with you?"

The same thing happens in quality. Again, the motive is self-interest. If the tape sewer does a bad job of tape sewing and our quality supervisors do not catch it, the next section has a harder job to do the tape felling and stands a chance of being blamed for bad work which is not their fault. In self-defense, they call the attention

of the shop chairman to it, when, in the rush of work, something is overlooked.

It goes farther than that. I have had a deputy from the shop drop in to gossip for no apparent reason. After he left, while I was wondering why he came, I would remember that he had dropped a hint that perhaps I hadn't been out to Factory B as recently as I should have been, because it seemed to him that something was going on there. Of course he would not interfere directly.

If some trouble is cropping up and our management hasn't gotten on to it quickly enough, he knows it is going to result in a block somewhere. We will catch it sooner or later but maybe not soon enough. When we do, it will mean a block of work that has to be pulled out and ripped and done over. The flow of work is interrupted, with people waiting for work, and so on.

In matters of production, in matters of quality, in matters of personnel management, we get a great amount of help from the representatives of the workers. Again and again, they will come to me and say, "Now, technically, in this situation you have the right to do so-and-so," or, "We have the right to do so-and-so, but don't you think it might be a better scheme if we were to do thus and thus instead, for these reasons," and then it is developed.

Sometimes it is a better scheme, sometimes it is not, but the important point that I want to call to your attention is that here is a type of constructive thinking, a positive contribution to management, that can come only through a decent, intelligent, and broadly administered collective bargaining arrangement.

It can come, however, only when the basic fears of both sides have been set at rest. You cannot hope or look for it before then.

Therefore, the most important single thing that a management newly entering into a collective bargaining agreement can do—and I cannot emphasize this too strongly—is to develop for itself a really broad, honest, intelligent point of view, and convince and persuade the workers of that fact. It must do the best it can to put the mistakes of the past behind it. The sooner management recognizes this, the better progress will be made in collective bargaining arrangements.

There is a wealth, a deep mine of constructive help, of positive values, that can be tapped in decent working relationships.

# The Contents of Collective Agreements

## The Wisdom of Hindsight<sup>1</sup>

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**D**URING the last year many enterprises in the United States have started collective bargaining for the first time and others have resumed it after a lapse of some years. Some industries, such as railroads, printing, clothing, and building, have practiced collective bargaining for a generation or more. Suppose that the industries with considerable experience in collective bargaining could by some miracle be given an opportunity to make a fresh start. What mistakes of the past would they avoid? What things would they do differently? Since many enterprises are now starting collective bargaining, this is an opportune time to review experience with it, to note the principal mistakes that have been made by each side, and thus to help the industries which are beginning collective bargaining to profit from the past.

Collective bargaining has two principal aspects. In the first place, it is a method of introducing civil rights into industry, of replacing the little oriental despotisms that have existed in many plants with due process of law, of giving workers some kind of equity in their jobs. In the second place, collective bargaining is a method of fixing the price of labor and of selling labor. I propose to discuss our experience with collective bargaining first as a method of creating a system of industrial rights and duties, and second, as a method of selling labor.

### Rights and Duties

The system of industrial rights and duties which collective bargaining endeavors to establish deals with such matters as entrance to the trade, hiring, training, promotion, reduction of staff, discharge, overtime pay, technological change, methods of compensation. The success of collective bargaining requires that a proper

*If both sides to a collective agreement would study the possibilities in the light of knowledge of the industry, economics and with regard for each other's rights as well as duties, contracts could be made simpler and more responsive to the needs of managements and unions.*

balance be maintained between the employer's freedom to manage his plant and the workers' right to protection against arbitrary management. If the employer is given too much freedom, hostile employers will take advantage of it to destroy the union. If the em-

ployer is given too little freedom, union plants will lose out in competition with non-union plants, and the efforts of the union to protect the jobs of its members will have the unintended effect of destroying these jobs.

Rarely do unions willingly give the employer too much freedom. When they do this, it is because they are too weak to avoid it. It is not easy for unions to see the mistake of giving the employer too little freedom because the consequences of this mistake are not immediate. That is why the history of collective bargaining contains many instances of unions, such as the old window glass workers, the cigar makers, or the upholstery weavers, which destroyed themselves or made themselves weak by imposing excessive restrictions on union employers. The tragedy of these cases is that the union can usually give its members adequate protection without seriously handicapping the employer in his competition with non-union employers.

To illustrate the point, consider the efforts of unions to control hiring. Every now and then one encounters a union that requires the employer to hire only through the union office. This arrangement is ordinarily unnecessary because union members can be protected against discrimination in hiring by the simple requirement that the employer give preference in hiring to properly qualified union members or to men willing to join the union after a given probationary period. Unless the union is prepared to give very efficient employment service, the requirement that the employer hire through the union office is likely to be a serious handicap to him. In the long run the arrangement also is likely to be harmful to the union. Unless the union

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enforces a mechanical rule requiring that the men longest unemployed be sent to jobs first (obviously a serious disadvantage to the employer), the union employment office is likely sooner or later to become an adjunct to a political machine within the union. Sooner or later suspicion of favoritism in handling placements is likely to split and weaken the local union. If the union office is able and willing to do a good job of placement, the employer may find it advantageous to hire through it because the union office may be well informed of the qualifications of union members and of the requirements of employers. There is a great difference, however, between hiring through the union office as a matter of practice and as a matter of compulsion. And in any event let the employer avoid becoming involved in union politics by taking on certain people as a favor to the business agent.

#### **Advantages of the Closed Shop**

Closed shop agreements often have advantages to the employer as well as to the union because they assist in preventing friction between member and non-member employes and because they make the unions easier to deal with. Experience shows, however, that closed shop agreements give the union a temptation to adopt restrictive membership requirements. The closed shop makes the union members feel that the jobs in the union plants belong to them and they naturally wish to limit the number of men who have access to these jobs. Some employers have sought to protect themselves against restrictive admission requirements by granting the closed shop only in return for an agreement that the union will keep its membership open to properly qualified members and will keep its admission fees reasonable. Such arrangements are likely to have the support of national union officers because in the long run restrictive admission requirements are likely to be a boomerang to the local union which puts them into effect.

#### **Employee Selection**

In order to give employers a good opportunity to select their employes and at the same time to protect union members against discriminatory discharge, trade agreements often prescribe a probationary period within which employers are free to decide whether or not they wish to keep newly hired men and after which no man may be discharged without due cause. Such an arrangement is essentially fair to both sides. In view of the present crudity of employment techniques, testing

people out on the job must remain for some time to come the principal method of determining their qualifications. Every now and then one finds a union which presses rather consistently for a reduction in the probation period. It is likely to be a popular demand. Nevertheless, if the probationary period is fairly short to begin with, as most of them are, the union really gains nothing by reducing it. On the contrary, the bargaining power of the union is strengthened by a probationary period long enough to permit the employer to do a strictly first-class job of sifting and selecting new workers. The better selected the force, the more difficult it is for the employer to duplicate it, and, therefore, the better the bargaining position of the union.

#### **Seniority and Layoffs**

Many unions endeavor to exercise some control over staff reductions either by prescribing equal-division-of-work or layoff according to seniority or a combination of both. The depression has greatly stimulated the interest of unions in the control of layoffs. An examination of over five hundred agreements made before 1929 reveals that only one out of three contained restrictions on layoffs. An examination of several hundred agreements made during the last year reveals that two out of three contained restrictions. In a considerable number of instances, the rule restricting layoffs is written without a full appreciation by either employer or union as to what it really wishes. This is revealed by the fact that many more agreements prescribe layoffs by seniority than provide equal-division-of-work. Nevertheless, it has happened again and again that when a period of slack work actually arrives, each side decides that it prefers equal-division-of-work, at least down to thirty-two or twenty-four hours a week, to layoffs by seniority. This happened in the fall of 1937 in many plants where the agreements provided merely for layoff in accordance with seniority and contained no equal-division-of-work clause. Some tendency exists to combine the equal-division-of-work and the seniority principle, usually by requiring that men of a given period of service (six months or thereabouts) be dropped first, then work divided up to a certain point, and finally, resumption of layoffs by seniority. Many difficult situations following 1929 would have been avoided had the agreements provided for both equal-division-of-work and layoff in accordance with seniority.

When a seniority rule is written into an agreement,

there is a temptation for the union (and sometimes the employer as well) to attempt to make the rule too specific, elaborate, rigid, and mechanical. Seniority rules are likely to produce many unintended results because they apply to a vast variety of situations which neither side can clearly foresee when the rule is written. There are special seniority problems connected with interdepartmental transfers; layoffs produced by technological change may produce a different problem from layoffs produced by a business slump; there are seniority problems peculiar to multiple-plant companies. The operation of seniority rules is still imperfectly understood, as is witnessed by the many headaches which new seniority rules have produced during the last several years. Both unions and employers would be wise in most instances to write a general and flexible rule embodying the general principle of seniority and to work out the application of this rule to specific situations as they arise.

Sometimes a seniority rule is given a broader application than is advantageous to either side. Recently a manufacturer spoke to me with regret of the fact that in the war days he had agreed with the union that mechanics would be promoted to the position of "straw boss" or leading hand on the basis of seniority. This has meant that these jobs have been filled almost entirely by men of twenty-five or thirty years' service who have no prospect of ever being promoted to be an assistant foreman or foreman. It has meant that the employer loses the opportunity to test the fitness of some employees for promotion to supervisory jobs by giving them a chance to handle men in a small way. It has also meant that there is often an unsatisfactory relationship between the leading hands, who are usually men of fifty years of age or more, and the assistant foremen who are bright young men who have gone through high school and who have served a modern apprenticeship course.

#### Seasonal Fluctuations

Most industries are subject to more or less violent seasonal fluctuations. This fact is reflected to a surprisingly small extent in trade agreements. Every now and then one finds an agreement which provides some flexibility to the working week, such as the longer work week for a limited number of weeks during the busy season, but most agreements provide for the same working week throughout the year. Probably the rigid working hours found in most agreements are a result of the efforts of trade unions to reduce unemployment by

reducing working hours. Seasonal unemployment is mainly a result of *fluctuations* in employment—it reflects the ups and downs in the demand for labor. Obviously, unemployment which results from fluctuations in employment cannot be eliminated by the limiting of hours of work. Regardless of what the limit may be, whether it be thirty hours, twenty-four hours, or even twenty hours a week, there will be unemployment so long as demand for labor fluctuates. This unemployment can be reduced by a flexible working week which permits the men to work longer hours during the busy season and thereby limits the force required by the industry at the peak of the season.

#### Technological Improvement

Of greatest importance is the policy pursued by employers and unions toward the introduction of labor-saving devices and processes. The old window glass workers destroyed themselves by opposing machinery. The cigar makers' union almost destroyed itself by opposing (against the advice of its officers) the bunch-breaking and roll-up system. Everyone will agree that it is important for unions to protect workers in so far as is practicable against displacement by new machines and methods. Usually this can be done without imposing permanent handicaps on union employers. Under some circumstances it is feasible to protect workers by the simple provision that new methods or devices may not be permitted to deprive any employee of his job. This arrangement does not prohibit the introduction of a new method; it simply limits the rate at which the new method is introduced. In some cases the new machine or method may eliminate so many jobs that the only practical policy is to permit the displacement of workers and to give them a dismissal wage.

Every now and then a union makes the serious mistake of attempting to protect its workers against displacement through the device of make-work rules. For example, the union may require that the new machines be operated by as large a crew as the old machines. Or it may attempt to limit the output of the new machine, as in the case of the proposed seventy-car limits of freight trains. Such make-work rules are dangerous to the union and the employer alike, because they represent a permanent, as distinguished from a temporary, handicap to the employer, and, in addition, a handicap which becomes greater in the course of time as the efficiency of the new machine is improved. Furthermore, such make-work rules become exceedingly diffi-

cult to abolish because, as time goes on, the number of jobs kept in existence solely by the make-work rule tends to increase. Hence, the political problem of inducing the union membership to give up the rule becomes more formidable. Unions and employers should not lose sight of the fact that the ultimate burden of make-work rules falls in large measure upon the men. The reason is plain. The amount which the union can extract from an employer depends fundamentally upon (1) the employer's income, and (2) the bargaining power of the unions. If the union elects to impose higher costs upon the employer in the form of restrictive rules, it reduces its ability to impose higher costs upon him in the form of higher wages.

#### The Value of Simple Agreements

A large proportion of our trade agreements are too long and complicated and contain too many rules. Recently, I had occasion to examine a number of trade agreements in British industry. I had expected to find the British agreements more elaborate than ours because their unions are older and stronger. Much to my surprise, I found most of their agreements simpler than ours. The British employer is much less adverse than the American employer to signing an agreement with a trade union, but he seems to be much more particular than most American employers about the terms of the agreement. When one picks up a British trade agreement, one finds it is just about as long as one of ours, but the length comes not from shop rules, but rather from the fact that the agreement spells out in considerable detail how cases shall be handled, where they shall go first, where next, where next, and where ultimately. If one may contrast in general terms the policies represented by the British trade agreement and the American, one may say that the Americans are more disposed to rely upon the legislative method—the method of a definite rule spelled out in advance—and that the British are more disposed to rely upon the administrative method—the method of settling individual cases in the light of particular facts. The British method is more flexible and more adaptable to a rapidly changing world. It is less likely to bind both sides by rules which later become obsolete and a handicap to each, but which are difficult to abolish because they have created vested interests among the workers or even among the employers.

It has been possible for the British unions to cooperate with their employers in developing the admini-

strative method because British employers have been less hostile than American employers to trade unionism. Consequently the British unions have not felt so strongly as ours the need to be protected by specific rules against hostile employers. If American employers who are now embarking upon collective bargaining do not wish to have their trade agreements gradually develop into elaborate, cumbersome, and more or less obsolete sets of rules, let employers take care not to challenge the right of the union to exist and let them tolerate no discrimination by subordinate executives against union members. The development of the administrative method of handling cases has also been much assisted in Great Britain by the fact that the employers in most industries are organized into strong employers' associations capable of disciplining their members. This is important because it gives the union the protection of the employers' association against a particular employer who is unfair. Cases which the union cannot adjust with the employer are taken up by the union with the association. The success of collective bargaining has been promoted in several industries in this country by strong employers' associations, but as a general rule, American employers are weakly organized.

American collective bargaining has one very brilliant example of a union of the administrative rather than the legislative method. It is found in the men's clothing industry. It is of vital importance that American employers who are now embarking upon collective bargaining protect themselves against the development of elaborate and cumbersome agreements which are bound in the course of time to become more or less obsolete. Employers can do this by removing the fear of the trade unions that the employer is waiting for an opportunity to discriminate against their members and by handling grievances which arise in such a manner that the unions feel no need of a rule.

#### The Price of Labor

Collective bargaining is a form of price fixing—a way of fixing the price of labor. With 5,000,000 or 6,000,000 men in trade unions it represents price fixing on a very large scale, a scale so large that the results will affect profoundly the general business situation. How successfully collective bargaining works will depend upon whether employers and trade unions do a good job of keeping the price of labor properly adjusted to other prices.

Experience reveals that there are four principal dan-



gers to be guarded against in fixing the price of labor in collective bargaining. One is putting wages in union plants too high in relation to non-union plants; the second is putting up wages too rapidly in periods of business revival; the third is continuing to raise wages after business has turned down; the fourth is making agreements for an extended period without providing a way of adjusting wages to changes in business conditions. Let us consider these one by one.

#### Union versus Non-Union Wages

The mistake that has probably caused more trouble than any other in American collective bargaining is fixing wages in union plants so high that these plants could not hold their own in competition with non-union plants. Union plants can obviously stand only a limited differential in wages. How large a differential they can stand depends upon the importance of labor in the cost of the product, the nature of the demand for the product, the mobility of capital in the industry, the efficiency of union labor as compared with non-union, the efficiency of the equipment in union plants as compared with non-union. In case of collective bargaining it is important for the union leaders and the employers to estimate carefully how much of a disadvantage in wages the union plants can stand without serious loss of business and to avoid exceeding this differential. In estimating the differential that union plants can stand there are several things which the leaders of both sides should bear in mind. One is that the differential which union plants can stand is much greater in periods of boom than in periods of depression. A second is that once a differential between union and non-union plants becomes too large, it is difficult to reduce it by wage cuts in union plants, because non-union plants meet these cuts. The experience of the hosiery industry and the bituminous coal industry is illuminating on this point. A third is that the effects of an excessive differential do not show themselves immediately because some time is required for new non-union plants to attain efficiency. But although the loss of markets to non-union plants may be slow at first, later it may become rapid.

Time does not permit a satisfactory survey of the instances where the union's share in the market has been seriously diminished by wages higher than union plants could stand. Everyone responsible for the conduct of collective bargaining, both on the employer's

side and the union's side, should make himself familiar with the experience on this point. Between 1915 and 1920, for example, the tapestry carpet weavers in Philadelphia acquired control of that market and pushed up their wages by about 165 per cent. At the height of its prosperity in 1920, the union had about 1800 members. It was believed that the union mills could stand a differential of 10 or 15 per cent above the non-union, but the differential grew until it became about 50 per cent. By 1926, the union had only 800 members working in Philadelphia and more than half the union mills had ceased operating. The story of the Philadelphia upholstery weavers is similar. Between 1911 and 1921, they more than doubled their wages. They also limited each weaver to one loom. Up to about 1925, while trade was brisk, the union held its own. After 1925, however, the union lost ground rapidly, and from about 1927, not more than one-third of its membership was employed.<sup>2</sup> In 1920, the union part of the bituminous coal industry produced nearly 60 per cent of the bituminous output. The union endeavored to maintain a basic wage of \$7.50 a day. Non-union mines were paying from 30 to 50 per cent less. By 1927, the union mines were producing only 40 per cent of the output. The strike in that year against demands of union operators for a lower wage scale enabled the non-union mines to obtain an even larger share of the market.

The shoe industry, the cigar industry, the hosiery industry, the women's garment industry, and many others afford examples of shrinkages in the proportion of output produced by union plants because their labor costs were too high. In some cases, such as hosiery, bituminous coal, and women's garments, the N.R.A. enabled the union to re-establish its position in the market. The history of collective bargaining also affords instances of unions and union employers who have been keenly alive to the necessity of carefully watching the cost differential between union and non-union plants and of not permitting it to become too large. Perhaps the best illustration is afforded by the Amalgamated Clothing Workers. The policies of this union during the twenties are worthy of careful study by employers and labor leaders alike. The problem of cost differentials between union and non-union plants is important today in a great many industries—radio, rubber, automobile parts, shoes, and all of the needle trades.

<sup>2</sup> For a more complete analysis of the experience of the tapestry weavers and the upholstery weavers, see Miss Gladys L. Palmer's excellent study, *Union Tactics and Economic Change*, University of Pennsylvania Press, Philadelphia, 1932. (228 pages). \$2.00.

### Wages in Periods of Recovery

A second pitfall to be avoided in setting the price of labor is pushing up wages too rapidly in a period of recovery. Here we encounter a widespread popular fallacy with respect to wages. The fallacy consists in the belief that prosperity can be created by raising wages. I wish that this were true. That kind of a world would be relatively free from difficult economic problems, because by raising wages ten-fold or a hundred-fold, we could create enough prosperity to give every family several cars and perhaps a private yacht. In that kind of world there would be no room for Marxians or Fascists. Unfortunately, the Lord did not create that kind of a world. The unpleasant fact seems to be that the demand for most types of labor, when a relatively short-time interval is allowed for, is what the economists call elastic. This means that when the price of labor is raised in the face of a stationary demand for labor, the total expenditures for labor decrease rather than increase. Hence, raising the price of labor in the face of a stationary demand for it, diminishes rather than increases consumer incomes. All of this means that higher wages are a way of *distributing* the fruits of prosperity rather than a way of *creating* it, and that as a general rule wages should be raised through collective bargaining only in response to increases in the demand for labor. In other words, collective bargaining is a device by which workers are able to take prompt advantage of an increase in the demand for their services.

A conspicuous instance of pushing up wages too fast relative to the demand for labor is provided by the building trades. During 1937, building has been roughly only half the 1929 level and private building has been less than half. Nevertheless, the union wage scales in the building industry by the spring of 1937 were substantially the same as in 1929. Because there has been relatively little building for five or six years, it has been widely assumed that we are confronted with a housing shortage. Indeed, responsible statisticians have estimated that the shortage is somewhere between 1,500,000 and 2,000,000 houses. The shortage, I fear, is much less than this. People could buy more houses if they wished to, but they prefer to economize on housing and to spend money for automobiles, radios, refrigerators, and vacations. Recent studies of the Bureau of Labor Statistics show that families in which the principal wage earner receives about \$1200 a year spend almost as much on automobiles as they do on

housing. This means that housing is in fierce competition for the consumer's dollar with the automobile industry, the radio industry, the refrigerator industry, and the vacation industry. Housing has been losing out in this competition since 1926. It is easy to see why this is so. Labor in automobile plants receives on the average about \$1 an hour and in the parts plants it receives less. It is assisted by the latest in mechanical equipment and in mass production methods. The Engineering News Record index shows that skilled labor in the building trades of twenty cities receives on the average \$1.35 an hour. Labor in the building trades uses old-fashioned handicraft methods. How can such labor hope to compete with labor receiving 25 per cent less and producing by modern methods under much more advantageous conditions. In 1920, a cheap six-cylinder car cost about 40 per cent as much as a cheap house; in 1937, a cheap car cost one-fifth as much as a cheap house and the car had improved more than the house. It is not my purpose to suggest that labor in the building trades is solely responsible for the failure of housing to hold its own in competition with the automobile. A combination of factors is responsible. Nevertheless, it is clear that collective bargaining in the building trades has been conducted without proper regard to the market realities.

### Wages in Periods of Recession

A third pitfall to be avoided in fixing the price of labor in collective bargaining is raising wages after business has turned down. This happened in 1920, it happened again in 1929 and 1930, and it happened in 1937. Demand deposits began to drop in January of 1937. The bond market suffered a bad break on March 12, 1937 and continued to decline with little interruption. Raw materials began to break early in April and declined rapidly after that time. These three series, demand deposits, bond prices, and raw material prices, are among the most reliable indicators of the course of business and by the beginning of May they were all indicating a recession. Of course, no one could tell whether the recession would be mild or severe and most business men expected that it would be mild. It is never possible to detect a turn in a statistical series until sometime after that turn has occurred. Nevertheless, by the beginning of May it was clear that the immediate future of business was highly uncertain and that a recession, either mild or severe, was probable. The process of raising wages, however, continued without

interruption. Indeed, in many instances it persisted until late in the fall. This must be regarded as an error in business judgment of first magnitude. If collective bargaining is to work reasonably satisfactorily, wage increases should cease as soon as it becomes reasonably certain that a recession is occurring. Otherwise, enterprises will burden themselves early in the depression with cost increases that accentuate and prolong the decline in business. Even though both unions and employers confidently expect the recession to be mild and short, conservative business judgment demands that action on wage increases be deferred until the situation has been clarified.

#### **The Need for Flexibility**

A fourth pitfall to be avoided is fixing the price of labor too far in advance. A conspicuous example occurred in an important industry of New York City in 1928. The employers were anxious to obtain a five-year agreement. The union, exercising better business judgment than the employers displayed, was opposed to a long-term agreement. In order to induce the union to accept a five-year agreement, the employers consented to give a wage increase on the first of January of each year. In effect this meant that the employers were asserting that they could predict the course of business for five years ahead! It amounted to a declaration on their part that there would be no serious drop in business for five years. By January, 1931, the employers in this industry were thoroughly sick of granting wage increases in the face of a sharply declining business. A curious aspect of the case is that this same industry had encountered difficulty with a long-term agreement during the war period.

Both parties to collective bargaining need to have a realistic conception of the rate at which wages can be raised. When collective bargaining is first instituted, there is usually a certain amount of slack that can be taken up without serious harm to employment. After this initial period is over, however, the rate at which collective bargaining can raise wages in industry as a whole cannot be much more than the rate of increase in the productivity of labor. This increase during the last several generations seems to have averaged about 2 per cent a year.

#### **The Need for Mutual Understanding**

It is evident that the successful operation of collective bargaining requires, among other things, a lively ap-

preciation by each side of the problems of the other, a willingness of each to help the other side with its problems, and also a keen understanding by each side of their common interest in the prosperity of the country. The responsibility of creating this reciprocal interest in each other's problems must rest primarily upon the employer. This may impress you as an unfair statement. Nevertheless, a little reflection will convince you, I believe, that it is true. Consider the position of the leaders of a newly established union. They know little about the employer's business or his problems. Only the employer is in a position to give them this information. Above all, the leaders of the new union cannot escape the fear that the employer may take advantage of the first good opportunity to destroy their organization. Many of their demands, which may impress him as unnecessary or even arbitrary, spring from their fear that the employer may try to destroy the union. Only the employer is in a position to dispel that fear. If the employer wishes collective bargaining to develop into a co-operative relationship, let him take the first step by making it plain that he is not hostile to the union and let him make it his business to try and understand the problems of the union and to do what he can to help it and its officers with its problems. Let me be more specific:

1. When demands are made, don't turn them down simply because they seem unreasonable. Find out what is behind them. Usually there is good reason for even the most unreasonable demand. Try and satisfy it.

2. Never refuse to discuss an issue because there is no rule governing it in the agreement. Take advantage of opportunities to discuss the problems which the union brings to you and give its officers an opportunity to consider your problems.

3. Adjust grievances promptly. Don't back up subordinates right or wrong. Make it a rule of management that the subordinate who makes a mistake must expect to be overruled.

4. Help the union to develop good shop chairmen. This is closely related to the prompt settlement of grievances.

5. Don't "short-circuit" the union; if you recognize it, deal with it and through it. Make no announcements of labor policies without consulting it.

6. Don't hesitate to seek the union's help in solving the problems of management, such as spoilage, poor workmanship, and the like. Most unions like responsibility and they are developed by being given a chance to assume it. Some people describe unions as irrespon-



sible bodies. Sometimes they are, but I know of no organizations that really hunger and thirst after responsibility more keenly than unions. Give union officers a chance to warn their members before taking disciplinary action against members.

Such a policy of co-operation may grow in the course of time into a formal relationship for the purpose of discussing mutual problems at regular intervals, such as has developed on several railroads in this country and in a number of industries in Great Britain.

#### Understand Economic Problems

If collective bargaining comes to cover a large part of our industry, as it seems likely to do, it will not be successful unless it is conducted in the light of a good understanding by both sides of the fundamental economic problems of our economy. These problems are likely to be quite different in the twentieth century from what they were in the nineteenth. There is not time here for an elaborate economic analysis. The essential facts, however, are these. Labor cannot be prosperous unless industry is prosperous, and industry cannot be prosperous unless there are enough attractive investment opportunities to absorb the amount which individuals and corporations currently save. During the nineteenth century, when the vacant continents of North America, South America, Africa, Australia, and even large parts of Asia, were being developed with the savings of Europe, no one needed to worry much about maintaining the volume of investment. Conditions have changed. With vacant continents no longer awaiting development, with the increase in population slowing up, with many barriers interfering with the international movement of capital, the major economic problem of the twentieth century is maintaining the volume of investment. Labor has just as much of an interest in this problem as capital, because labor cannot be prosperous if savings are being hoarded in substantial volume.

Collective bargaining can be operated either to increase the opportunities for investment or to diminish them. I am reasonably optimistic about the ability of both sides to operate collective bargaining so as to encourage the prompt investment of the savings of the community. Let us make no mistake, however, about the hard facts of the case. Both the prosperity of industry and the maintenance of the workers' standard of living require that savings be promptly invested. Unless collective bargaining is operated so as to induce the

prompt investment of savings, it will fail in its essential objective of giving the workers a higher standard of living.

#### Discussion

**N. I. Stone.**<sup>1</sup> The thing that has impressed me most about this meeting is the novelty of the program. I have been coming to meetings of the Taylor Society for almost twenty years and I think this is the first time that so much attention has been paid to problems of union labor.

Apparently, the Wagner law has made quite a difference. Whether management likes it or not, it is now obliged to deal with organized labor, whenever it can get a vote; and if the development in the industries which are now facing organized labor for the first time is going to be along the lines of what it has been in those industries which have had a longer experience with organized labor, perhaps this relationship will continue whether or not the Wagner law remains on the statute books.

We have just heard Professor Slichter speak of the fairly general relationship with organized labor in England where there are no laws on the statute books compelling the employers to deal with it. Yet dealing has been going on as a matter of mutual convenience and advantage.

Those of you who heard Professor Taylor yesterday may have been impressed, as much as I was, with the unity of thought that was expressed by him and by Mr. Greenberg today, both having had a similar background of experience. You will recall that Professor Taylor spoke about two aspects that chiefly interest the union: one, the question of the tenure or control of a job; and the other, the matter of wages.

You may recall that he was not afraid of the closed shop and pointed out that as long as the union is not sure about the control of its membership, it will always be on the defensive and less inclined to be reasonable and to take a constructive view of the needs of the industry than it will once that question is out of the way.

He gave us a few interesting illustrations. Having been through a similar experience, perhaps I can give you another illustration of that fact. In 1919, right after the war, the Rochester clothing industry was induced for the first time to recognize the Amalgamated Clothing Workers union. It was a non-union market

<sup>1</sup> Consulting Economist, New York.

up to that time and they were very reluctant to have anything to do with a union.

Sidney Hillman, who is a shrewd strategist, sold them the idea. They said they would never have a closed shop. He said, "That's all right. We won't have a closed shop. Write your own ticket." So they agreed to a preferential union shop, meaning that all things being equal, union men receive preference but nobody is compelled to join the union.

I was one of five men who were brought into the Rochester clothing market to manage the industrial relations for the manufacturers. Soon we had this sort of experience: the union deputy comes in with a grievance; a certain worker or section of workers is not satisfied with a given piece rate and wants it increased. The labor manager, after looking into the matter, turns down the request. He feels that the rate is right and to increase it would upset the rates on all the other operations. The union deputy is convinced and satisfied and the matter is dropped.

About a month later, the union leader appears again and says, "I'm having trouble. You remember that rate? Well, these workers who were primarily affected say they won't belong to the union. They refuse to pay their dues. What about it?"

The labor manager says, "Well, you know this is an open shop."

"Yes, I know it is an open shop but they have been members. They joined the union and unless we can insist on their continuing to stay in the union, it will simply mean this: That whenever we have a request for an increase in wages, we will have to fight for it, right or wrong, because we have got to retain the members in our union. Now, unless you co-operate with us, you can see what the consequences will be."

Fortunately, there were four or five of us, labor managers, in the Rochester market and we sat down to consider the matter. As a result, seeing the inevitability and the logic of the situation, without changing at all the language of the agreement, we bowed to the theory that nobody is compelled to join the union, but having joined it, continued membership is enforceable. We entered into an agreement on both sides. The employer pledged himself to deal with the Amalgamated Clothing Workers union and the workers who chose to join the union are parties to this agreement.

If the company is compelled to abide by an agreement, the workers who entered the agreement, through their union are also compelled to see it through. A union is only a body of workers and if workers drop

out of the union, the union is but a shell. Therefore, having signed this agreement through chosen representatives, workers are bound by the agreement just as much as the employers are and while the agreement lasts, cannot withdraw from the union.

That brought peace and security and a sense of solidity to the union leader. It still left those workers who had not joined the union free to stay out, but the pressure of their fellow workers took care of that.

I think the great contribution that the clothing industry has made to the problem of dealing with industrial relations, especially on the basis of union relationship, is law in industry,—doing away with arbitrary rule on either side.

I know that arbitration has been operating in the printing industry and in the railroad industry and in a number of other industries, but the distinguishing feature in the clothing industry is its *continuous* operation. It does not have a panel of arbitrators who are called in once in a while when there is trouble, but there is a permanent arbitrator. While he is in office, he gives his entire time, if necessary. It is the same man before whom either side can appear from day to day.

The result is the building up of a body of common law, what Professor Slichter calls the administrative method, solving problems administratively as against having too many written rules such as have tied the railroads into knots.

I would rather call it a body of common law because each decision is not only a decision for the particular instance but lays down a principle, which is followed in similar situations.

**Mr. Arthur T. Davenport.**<sup>1</sup> We have been engaged in collective bargaining since 1888. Our Company, Sweet-Orr & Co., Inc., had a verbal agreement in 1890 and a written agreement in 1908. In the third generation of our collective bargaining, we are still alive.

The trouble with collective bargaining in many instances where it has not been a success is directly traceable to the employer. It will be found that he has not, as Mr. Greenberg pointed out, availed himself of the advantages of employee aid and co-operation. He has not taken the workman into his confidence and he has been selfish in his ends, with the resultant failure.

Our written agreement I think covers about twelve or fourteen lines. It was written in 1908 in Atlantic City and has been renewed annually, or bi-annually. There

(Continued on page 28)

<sup>1</sup> General Manager, Sweet Orr & Co., Inc., New York.

# Executive Responsibility

## The Span of Control in the Federal Government<sup>1</sup>

By MARSHALL E. DIMOCK

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THE head of a business organization must either co-ordinate or quit; the President of the United States, as the government is at present organized, cannot co-ordinate the administrative machinery even if he would. This is a serious situation for everyone concerned. It seems clear that, no matter how party fortunes may turn, the administrative task of the federal government will probably increase for some time to come.

Would it be possible to co-ordinate federal activities if we were able to apply established management principles to the organization and practices of our largest government, or must we admit that the only hope for a solution is in a lopping off of many activities and a shrinkage to manageable size?

The first thing to do is to consider the enormity of the problem, from a management standpoint. A comparison may help. The federal government employs, exclusive of those on relief and in CCC camps, as many persons as do the country's five largest corporations combined. Last year's federal expenditures were nearly twice as great as the expenses of the four largest corporations.<sup>2</sup>

Let us look at the subject from a slightly different angle. You all know that the management problem of the American Telephone and Telegraph Company and its twenty-three operating subsidiaries is a gigantic one. But suppose this enterprise had three times as many employees as it does; had several hundred services and products to handle instead of one, requiring every type of activity and vocation found in the social order; and tried to manage this horizontal empire of enterprise by means of centralized policy-making and executive co-

*The President of the United States is sometimes compared to the president or general manager of a large business corporation, but the analogy is more interesting than true.*

ordination, what do you think the result would be? This is the situation confronting our national government. It is made even more difficult because government administration, especially in a democratic

country, must operate within the limits of laws and regulations which assume a rigidifying character.

In consequence, the task confronting the chief executive is an impossible one. He may do his best to "take care that the laws be faithfully executed," but no man who knows administration and has practical sense should expect him to be a "general manager," in the accepted sense of the term.

I think there is a good deal to the contention that management, whether public or private, is ultimately a matter of "constitutional" setting, power relationships, and a structure of "rights." This is certainly true of the problem we are considering. The co-ordination of the federal bureaucracy is not a problem in itself; it is a problem which arises from and is controlled by the fundamental law and custom of our country. If one of our constitutional corner-stones were responsible "cabinet" government the President might stand a chance of being an efficient general manager. But our constitutional system aims at keeping the legislative and executive departments separate from each other, and in so doing renders responsible government and unity of executive command utterly impossible and unworkable. We pay a high price in administrative impracticability for an error in theory which was founded upon Montesquieu's misunderstanding of the English political system.

I may as well tell you now that I am pessimistic about reforming the administration of the federal government by short-cut means, such as departmental reorganization, for I think that the source of the difficulty is much deeper. Disorganization is the symptom, not the cause. The cause is failure to secure legislative-executive accord and thereafter to give the executive complete

<sup>1</sup>A paper read at the annual conference of The Society for the Advancement of Management, New York, N. Y., December 9, 1937.

<sup>2</sup>The relative size of a corporation depends to a considerable extent upon the criterion used. The corporations referred to here are American Telephone and Telegraph, General Motors, United States Steel, Standard Oil of New Jersey, and the Pennsylvania Railroad. The above comparisons will still be true under any criteria which may be used, even though some changes may be made in the list of the first five corporations.



authority and confidence to carry out the program of the government of the day. The President does not have full and single authority over the administrative services; it is the nature of our constitutional system that this confusion should exist; it is inherent in our public law that Congress should itself attempt to administer, and that the chief executive should, in popular regard, be thought responsible, but not be so in constitutional theory or in administrative fact.

I am persuaded that before we can expect efficient overhead administration or reorganization worthy of the name, we must make two fundamental and precedent reforms: establish the principle of responsible government at the center of our system,<sup>3</sup> thereby laying the foundation for unity of command,<sup>4</sup> and, secondly, provide for a dual executive, one nominal and the other efficient, in order that we may have reasonable grounds for expecting the numerous duties devolving upon the executive office to be dealt with by mere humans.<sup>5</sup>

The executive responsibilities of the President of the United States are, at present, too great for any single man to bear, if the occupant actually attempts to direct the administrative work of the government. It stands to reason that he must make the effort, impossible though it may be, because policies are no more successful than their administration and if the President neglects leadership and co-ordination, his dearest programs are bound to bog down and fail. But consider for a moment the enormous task we ask our chief executive to shoulder. He is party leader, chief appointing officer, prime legislator, commander-in-chief of the armed forces, conductor of foreign relations, ceremonial head, and manager of the administrative establishments which Congress has entrusted to his control. Can you imagine any chief executive of a business corporation performing so many and diverse functions and still knowing what was going on in the administrative departments? Of course you can't, and it is incredible to think that the political executive of any other similar-sized nation could perform the work of at least two men, the ceremonial head and the efficient executive. The single-headed executive system which we find in the federal government, and in the forty-eight states, is out of line with the best business and governmental practice. Great Britain has a King and Prime Minister, France a President and Premier,

city manager cities a mayor and manager, corporations a chairman of the board and president.<sup>6</sup> Functionally speaking, the theory is in all cases the same: the nominal head has his combination of duties, ceremonial and independent of management for the most part; the active executive has all he can do in actually leading, co-ordinating, and controlling. He is not solely administrative leader, but that is a central responsibility. I submit that the dual executive pattern is the one that has been tested and found satisfactory; that it needs to be applied to the federal government as a condition precedent to subsequent management reforms; and that the need for it is greater in the federal government than anywhere else I can think of because the management job is so stupendous and the task, at present, so clearly beyond human capabilities.

There is a limit to the executive capacity of even the greatest genius. Some writers on management seem to be far too sanguine in what they expect from the hypothetical chief executive. There are limits to human abilities, including co-ordinating ability. The latter limit appears in connection with the "span of control," by which we mean the number and range of direct and habitual communication contacts which exist between the chief executive and his principal fellow officers. Negatively stated, the effective span of control is the number of executive relationships beyond which any addition will result in delay and confusion. Before we look further into this principle and the way it operates, let us consider the present organizational and control relationships at the top of the federal hierarchy.

The President's Committee on Administrative Management found about a hundred department heads and agencies which were supposed to report directly to the President.<sup>7</sup> The most recent chart contained in the U. S. Government Manual shows about half a hundred of the most important governmental agencies (others not being shown) in direct relationship to the chief executive. The departmental situation is not quite so bad. The Department of Agriculture has twenty-five bureaus or offices heading up to the office of the Secretary, which includes an under secretary and two assistant secretaries who do a considerable portion of the co-ordinating. Commerce, on paper at least, is better off, for, although the Secretary is a member of seventeen commissions and boards, regular business clears

<sup>3</sup> Woodrow Wilson, *Congressional Government* (Boston, 1885); A. Lawrence Lowell, *The Government of England* (N. Y., 1926), I, pp. 29 ff.

<sup>4</sup> Marshall E. Dimock, "The Study of Administration," *American Political Science Review*, XXXI, No. 1 (Feb. 1937), esp. pp. 33-34.

<sup>5</sup> James Bryce, *Modern Democracies* (N. Y., 1927), II, pp. 461 ff.; Lowell, *op. cit.*, I, pp. 27 ff.

<sup>6</sup> In corporations the titles may vary but this type of relationship persists.

<sup>7</sup> President's Committee on Administrative Management, *Report* (Washington, U. S. Government Printing Office, 1937), p. 29.

through an administrative assistant, who in turn has but four immediate subordinates. In the War Department, to take but one more example, three subordinates and the war council report directly to the Secretary of War, but two of these, the Assistant Secretary and the Chief of Staff, handle the main functions.

Now what does this show? Analysis of the top organization reveals that the chief sinning against the span of control principle is done at the presidential level. The departments, though not pure, are as archangels by comparison. The departments have been faced with the problem and have done something about it—in some cases, at least. The presidential problem has continued for generations. *At precisely the level where the fewest immediate subordinates should exist, we find the most.*

How serious a matter this is will be seen when we examine some of the corollaries of the span of control principle. The nearer to the top of an organization you get, the simpler should be the communication and control relationships. Get clogged up at the top and the wheels will slow down all along the line. The higher the quality and the larger the responsibilities, the smaller should be the number of immediate subordinates; at lower levels, on the other hand, where the performance of specific tasks is all that is delegated and not the supervision of others, the number of relationships may well be larger. V. A. Graicunas' mathematical demonstration of the limit of the span of control shows that relationships grow geometrically when subordinates increase arithmetically.<sup>8</sup> Hence, the more attention an executive gives to the control relationship, the less likely is he, figuratively speaking, to project himself and his organization into infinity.

In discussions of the span of control principle one finds a good deal of necromancy, or perhaps I should say numerology. What is the magic number? Why assume that there is one? Sir Ian Hamilton said of the army, "The average human brain finds its effective scope in handling from three to six other brains. . . . The nearer we approach the supreme head of the whole organization, the more we ought to work towards groups of three; the closer we get to the foot of the whole organization (the Infantry of the Line), the more we work toward groups of six."<sup>9</sup> L. Urwick says the ideal number for "superior authorities" is four; for those at

the lowest level, eight or twelve.<sup>10</sup> Henri Fayol stated that in France "a Minister has twenty assistants where the Administrative Theory says that a manager at the head of a big undertaking should not have more than five or six."<sup>11</sup> The President's Committee on Administrative Management recommended the establishment of two additional departments, making a total of twelve.<sup>12</sup> The British Machinery of Government Committee reached a similar conclusion.<sup>13</sup> I once heard of a case in which the editor of a scholarly journal is said to have refused, with uncustomary frankness, an article because, "You have advocated the establishment of seventeen departments and everyone knows that more than ten make efficient management entirely out of the question." This sort of speculation is interesting and may be worthwhile when the other distinctive and qualifying factors are given sufficient weight. But let us not be dogmatic. More importantly, let us keep in mind what is really the essential point: all executives are subject to the limits of their span of control. The magic number depends not only upon the enterprise but also upon the executive.

The work of federal departments is diversified, not homogeneous; government is asked to do so many things that unrelated functions inevitably find their way into the same organizational framework. This makes co-ordination more difficult and at the same time makes observance of the span of control principle peculiarly important. Luther Gulick correctly argues, I think, that "the number of immediate subordinates in a large, diversified, and dispersed organization must be even less than in a homogeneous and unified organization to achieve the same measure of co-ordination."<sup>14</sup> Yes, but how difficult it is to follow this precept when the organization is so large and diversified that the man sitting on top can see only a small part of it at any one time and when the fear constantly exists that violations of congressional mandate or dishonesties will crop out. Under these circumstances, even a courageous man is likely to feel, at times, that it is more important to play safe and encumber management with rigid regulations than stake everything on accomplishing objectives by giving division heads more freedom.

<sup>8</sup> L. Urwick, "Executive Decentralization with Functional Co-ordination," *Public Administration*, XIII, No. 4 (October, 1935), p. 348.

<sup>11</sup> Henri Fayol, "The Administrative Theory in the State," in Gulick and Urwick, eds., *op. cit.*, p. 110.

<sup>12</sup> President's Committee on Administrative Management, *op. cit.*, pp. 31 ff.

<sup>13</sup> Ministry of Reconstruction, *Report of the Machinery of Government Committee* (London, H. M. Stationery Office, 1918), p. 5.

<sup>14</sup> "The Theory of Organization," in Gulick and Urwick, eds., *op. cit.*, p. 9.

<sup>8</sup> V. A. Graicunas, "Relationship in Organization," in *Papers on the Science of Administration*, Gulick and Urwick, eds. (N. Y., 1937), pp. 181-87.

<sup>9</sup> Sir Ian Hamilton, *The Soul and Body of an Army* (London, 1921), pp. 229-30.

But it is hardly sufficient to dismiss the matter of federal departmentation and the span of control principle by saying that there is no magic number. On the basis of empirical experience the world over, which seems likely to be a more manageable number of direct control relationships for the chief executive, five or six, as recommended by Henri Fayol, or two or three times that many? Clearly the former. If the effective span of control in a responsible government is limited to five or six (and this assumption is supported by the experience of large business undertakings), then surely we should not greatly exceed this limit in our system, where the President has such a multiplicity of functions. And yet we need to add, alas, that in the case of our federal government it seems more difficult to do what administrative common sense demands than in almost any other governmental organization in the country. Every important interest will have its separate agency!<sup>15</sup>

When one is driven to this conclusion, one naturally thinks of the possibility of giving the President administrative help, of giving him personal assistants who will deal with administrative matters for him.

Certainly it is true that when an executive is expected to have an impossibly wide span of control he must have assistance if he is even going to approximate making it effective. There are, however, substantial difficulties which attend any attempt to introduce a corps of administrative assistants at the top level. Authority and responsibility may be divided further, instead of being concentrated and delimited. Moreover, as Urwick points out, executives are likely to interpret the position of such assistants in terms of status rather than of function.<sup>16</sup> It seems, therefore, better to work directly at reducing the control burden of the chief executive. It is apparently a sound principle of administration that a chief executive should always deal personally and directly with his vice presidents, with those officers who come within his span of control. A wise executive keeps the number of his department heads small and then uses a minimum immediate office force, consisting typically of a secretary and stenographers. To be sure, there are some examples of private corporations in which the office of "Assistant to the President" exists, but note that such assistants rarely assume relational duties and that whenever they do so the congeniality of top relationships is jeopardized. It is essential to good

management that the door to the chief executive's office should always be open to those who come within his span of control and that in dealing with them there should be the utmost candor and confidence. Initiative thrives on simplicity of relationships.

The way the staff functions are now handled militates against the President's being a real general manager. You all know that the fundamental theory of a staff service is that the agency should be close to the chief executive, dependent upon his needs and wishes, devoid of control authority. Contrast this ideal state of affairs with that which exists, both in tradition and in present practice, within the federal government. The Civil Service Commission is the outstanding case in point. It is physically and legally removed from the President, has an independent legal existence, and traditionally has come to look upon itself as a policeman rather than as a willing servant. I realize that there are historical explanations of this checks-and-balances relationship and that there are alleged justifications of expediency for continuing it. But I predict that sooner or later principles of sound administration will have to prevail over the "fight the spoilsman" psychology. There is a very serious question in my mind whether the gains in keeping out unqualified officeholders fully compensate for the losses due to inadequate selectivity for positions hard to test and the loss of initiative and morale resulting from restrictions upon freedom to hire and fire. Leadership, teamwork, morale, these necessary features of going administration, are more important to the success of large programs than merely erecting an entrance barrier to keep out patronage appointees.

I realize that this is a big subject, and that there are respectable arguments in support of the *status quo*. I shall have to dismiss the personnel aspect of top organization with a mere declaration of belief and recommendation. My belief has already been stated. The recommendation is that the Civil Service Commission be replaced with a personnel agency, similar to that proposed by the President's Committee,<sup>17</sup> which would act in accordance with the basic principle and tradition of a true staff service.

The President's managerial competence is also limited because he has been deprived of financial control properly belonging to him. Here again we find a violation of accepted administrative principle. Nothing is clearer than that accounting control and post-audit responsi-

<sup>15</sup> For a good discussion of this point see E. P. Herring, "Social Forces and the Reorganization of the Federal Bureaucracy," *Southwestern Social Science Quarterly*, XV, No. 3 (Dec., 1934), pp. 185-200.

<sup>16</sup> L. Urwick, *op. cit.*, p. 390.

<sup>17</sup> President's Committee on Administrative Management, *op. cit.*, pp. 9-11.



bility, when combined in the hands of the same person, are incompatible, absolutely at odds with what universal experience has shown to be necessary and desirable. Yet this combining of incompatible financial functions is what one finds today in the federal administration. The control over accounts and expenditures is an executive responsibility, and should be placed in the Treasury, where it belongs. The making of an audit is a fiduciary function, independent of the accounting control, and made afterwards. This latter function, but it only, is the task of an Auditor-General, who may well, in accordance with English company law tradition, report directly to Congress, the governmental equivalent of the corporate board of directors.

What does the theory of the staff function have to do with the span of control principle? It may seem that I am getting off the subject. I don't think so, because there is a close and vital connection between the two. The more independent staff agencies there are, the more extensive and complex becomes the executive's range, but not competence, of attempted control. The more fully staff theory is understood and practiced, the more effective the executive will be in co-ordinating the line activities. In the federal government, time-tested principles of staff activity are not only violated, but the number of independent agencies further complicates the President's co-ordinating task. Staff work is done in all ten of the existing departments, but among those which traditionally have advised the President on general administrative duties and have serviced all departments, Treasury and Justice stand out.<sup>18</sup> In addition to these two departments, there are the Civil Service Commission, the Bureau of the Budget, and the National Resources Committee, all of which perform basic staff functions. The General Accounting Office, already mentioned, cannot strictly be called a staff agency, although it has independent existence. The recommendations of the President's Committee provide for keeping the personnel agency (under a single-headed director), the Bureau of the Budget, and the National Resources Committee in their present independent status.<sup>19</sup> All of them would be considerably strengthened, both in financial support and personnel. Granted that planning, finance, and personnel are important staff functions, and that the federal government needs to give more attention

to them, there may still be serious question as to whether they should enjoy status similar to that of a department, or whether it would not be better to relate them to one or another of the major departments. The Bureau of the Budget might, for example, be an integral part of the Treasury Department. If we were to follow the British plan, the personnel agency would also be assimilated by the Treasury Department, the department of "general administration." The proper position for a planning department in a large organization invariably raises a difficult problem of relationship, whether that organization be private or public. The top planning agency must take an over-all view, and hence if it were attached to one of the departments which has planning problems (Interior, for example), its influence with the other departments would be jeopardized or destroyed. On the other hand, give it independent status and departmental jealousy is difficult if not impossible to prevent. Every department carries on research, which enters into the policies which the head of the department recommends. The result is that the "policies" of the heads of the several departments and the research "recommendations" of the independent planning agency are likely to conflict. True, the choice between them rests with the President. But in the meantime, how about the attitude of the head of the department toward the planning agency and his willingness to co-operate? There is no completely satisfactory answer to the dilemma. All factors considered, the independent planning agency, reporting directly to the chief executive, is probably to be preferred.

We have now dealt with executive assistance, departmentation, and staff services; in order to round out the analysis we must pay some attention to the territorial or areal aspects of the span of control principle. This is the familiar problem of horizontal organization, the relation between headquarters and field, one of the most perplexing adjustments in all large institutions. A recent study has pointed out that there is considerable need for co-ordination in the field services of the federal government, in practice as well as in theory, but that "conflicts in the field occur much less frequently than is generally imagined." The author believes that "two-thirds of the conflicts that do occur are caused by lack of co-ordination at Washington," and that "fully half of the conflicts in the field must be settled in Washington."<sup>20</sup>

<sup>18</sup> To be sure, both of these departments have numerous line activities, which account for a major portion of all employees and expenditures, but nevertheless they advise on finance and legal matters which apply to the government as a whole, rather than merely to the department giving the advice.

<sup>19</sup> President's Committee on Administrative Management, *op. cit.*, pp. 5-6.

<sup>20</sup> James W. Fesler, "Executive Management and the Federal Field Service" in *Studies on Administrative Management in the Government of the United States*, No. IV (Washington, U. S. Government Printing Office, 1937), p. 44.

Eighty per cent of all federal administrative employees work outside of Washington. The largest organization in the country, in other words, performs most of its work in the field. How can you co-ordinate programs operating over a territory three thousand miles long, partitioned by mountains and desert, and manifesting as many regional differences as are found on the European continent? The answer is that centralization is tried but that it is made to work only with difficulty. Out of sheer necessity, and without much design, the federal departments have had to regionalize, decentralize. There are today over one hundred cases in which federal agencies have marked off regional administrative areas.<sup>21</sup>

At this point let us note some important theoretical observations. First, it stands to reason that the more co-ordination problems that are solved at the lower levels of the federal hierarchy, the more subordinates can be included in the executive's span of control. But it is also true that functional departmentation (a good and necessary thing in itself) makes inter-departmental co-ordination more imperative because activities may be conflicting or overlapping in the same area. Departmental activities are not mutually exclusive. Take, for example, the respective programs of the Reclamation Bureau in the Interior Department, in Soil Conservation Service in Agriculture, and the former A.A.A. program. In public works and natural resource use, especially, the need for co-operation between separate units is likely to be very great.

One practical solution would be to work toward regional centers of federal co-ordination, in which state and local agencies could also meet the corresponding federal service. The purpose is, of course, to achieve co-ordination in the field and hence cut down on the activities in Washington which demand co-ordination. Several attempts have been made to divide the country into homogeneous regions for various and composite reasons, the principal attempts being those of the National Resources Committee and of Howard Odum in *Southern Region*.<sup>22</sup> There is no question that regional consciousness is growing rapidly and that administrative regionalization, both public and private, is proceeding apace. But while these patterns are forming and boundaries are being investigated, it is important that in each tentative region a central administrative city be decided upon as a co-ordinating center. I am glad to say that progress seems to be taking place in this direction.

<sup>21</sup> National Resources Committee, *Regional Factors in National Planning and Development* (Washington, U. S. Government Printing Office, 1935), p. 71.

<sup>22</sup> Howard W. Odum, *Southern Regions* (Chapel Hill, N. C., 1936).

In the limited time available, I am not able to deal with any aspect of the subject in as extensive a manner as the importance of the problem deserves. This being the case, let me attempt, for purposes of clarification and emphasis, two sets of summary statements, one dealing with hypotheses of management and the other with recommendations derived therefrom.

The general propositions which I have already posited may be summarized as follows:

1. Legislative-executive accord is fundamental to unity of command.
2. The dual executive pattern is the one which has been tested and found satisfactory.
3. There is a limit to the executive capacity of even the greatest genius.
4. All executives are subject to the limits of their span of control.
5. The effective span of control is the number of executive relationships beyond which any addition will result in delay and confusion.
6. The higher the quality and the larger the responsibility, the narrower is the effective span of control.
7. In order to achieve the same measure of co-ordination, the number of subordinates in a large, diversified, and dispersed organization needs to be less than in a homogeneous and unified organization.
8. To preserve harmony and unity of management the chief executive must deal personally and directly with those who come within his span of control.
9. Staff agencies close to the chief executive, dependent upon his needs and wishes, and devoid of control authority help to enlarge the executive's effective span of control.
10. Leadership, teamwork, morale, these necessary features of going administration, are more important to the success of large programs than merely erecting an entrance barrier to keep out patronage appointees.
11. Accounting control and post-audit responsibility, when combined in the hands of the same person, are incompatible, absolutely at odds with what universal experience has shown to be necessary and desirable.
12. The more co-ordination problems that are solved at the lower levels of the federal hierarchy, the more subordinates can be included in the executive's span of control.
13. Functional departmentation makes inter-departmental co-ordination more imperative because activities may conflict or overlap in the same area.
14. Regional decentralization promotes efficiency and dispatch, and relieves congestion at headquarters.

The principal conclusions, or recommendations, which emerge may now be summed up. The first two are basic or fundamental ones, upon which much of the success of other more immediate steps seems to depend. Still, it is recognized that these common-sense constitutional reforms may be a long time in coming, if they are ever accomplished. The remaining points, with the possible exception of the third, are in a different category and seem to be likely changes of the near future:

1. Responsible, "cabinet" government affords the greatest assurance of businesslike, efficient administration. The checks and balances system should be superseded by a system in which responsibility and authority are made coextensive.

2. There should be a nominal chief of state, charged with responsibility for ceremonial duties and other formal matters of state, and a responsible, efficient head of the government of the day, one of whose principal duties would be that of administrative co-ordination.

3. It would be desirable to organize the work of the federal government into five or six departments.

4. The possible dangers in creating the office of "assistant to the chief executive" should be recognized, and the need for such an office lessened by making reforms in the organizational structure.

5. The Civil Service Commission should be superseded by a director of personnel, who would be assisted

by a council and corresponding officers in the principal departments.

6. The accounting and the post-audit duties, at present unified, should be separated, the administrative duties of day-to-day accounting control being placed in the Treasury department.

7. The number of staff agencies not connected with regular departments should be kept as small as possible.

8. The establishment of an over-all planning body is probably the best solution to the problem of planning, but pains should be taken to guard against duplication and friction.

9. Every effort should be made to agree upon centers of regional co-ordination and to encourage decentralization.

In conclusion I should like to add that if, in setting forth any of these conclusions, I have seemed dogmatic or unrealistic, it is something against which I have consciously tried to guard. Moreover, I realize that institutional moulds are hard to alter and that governmental ones are inclined to be particularly resistant to change. At the same time, let us never lose sight of the fact that necessity may some day make possible structural reforms which now seem visionary. Since common aspirations can be achieved only through sound, workable administrative machinery, in the long run theoretical formulation is the most practical pursuit which can possibly be undertaken.

#### Discussion of Collective Agreements

(Continued from page 21)

has been no change in the basic agreement and the adjustments are made from year to year.

The price agreement covers thousands of items, each negotiated on its own basis for many years. No price change downward has been negotiated that was not instituted by the employees, at least not one of any size, and I know of no price change upward that was not instituted by the manufacturer. That has been our experience over thirty years.

We approached the problem as an initial experiment under our late Mr. Sweet, a man who, at that time in 1888, was regarded as a wild-eyed, insane industrialist but who conceived the idea that the workers knew more about the problem than he did and he wanted the workers contented. He approached them on the subject and got this agreement. He inculcated into us, over the years, the theory that we are brokers for the employees' labor—that is our province. We sell their products exactly the same as Professor Slichter has shown us electricity is sold. We are the sellers. We don't own

the industry, they own it, it is their property. We will get the best prices we can for their produce. That is what has made many instances of improvement in production, in methods, in merchandise, in manufacture, many of which have come from the worker groups, where their assistance has been made welcome.

After forty or fifty years of experience with collective bargaining, we don't admit for a moment that any non-union house can compete with us on the same grade of labor for the same price for the same quality. That has been conclusively proven in national competition where the workers have come to us. And while we are talking here today bids are under consideration which have been prepared with that co-operation. (Editor's Note—Since the meeting, the contract referred to has been awarded in its entirety to Sweet-Orr.) Our experience in collective bargaining has been that we have been better off over the years than any non-union house using the same grade of labor and producing a comparable product.



# Executive Responsibility<sup>1</sup>

## Staff and Line Relationships

By EDGAR W. SMITH

Vice-President, General Motors Export Company, New York

I SUPPOSE the size, diversity and extent of our activity in the General Motors overseas operations dictate a clearer consciousness of the need for sound organization structure and practice than might otherwise be the case. Organization, in the last analysis, is simply a predetermined mechanism for the division of work that certain human beings are called upon to do. In the domestic sphere, it is often possible for personal contact and consultation to compensate in large measure for organization shortcomings. In the export business, however, the opportunities for personal contact among ourselves and with our buying public are far more restricted, and while human initiative remains the driving force behind this business as it does behind all others, there is a more insistent need for the clear definition of an organization structure, for the specific predetermination of the division of work, and for the cultivation of a thorough indoctrination in basic policy.

Implicit in this need is the need for utilization of the principle of line and staff. In a domestic organization, application of the line and staff principle is facilitated by the greater freedom of personal contact previously noted; in an organization extending out over the whole world the application of this principle, as the vital factor in effective organization, becomes more difficult, but by the same token, the need for it becomes more urgent.

It is interesting to speculate that in the old days of slow communications, the organization of any overseas enterprise, such as the East India Company, for example, must have taken the form almost exclusively of line delegation—there was no opportunity for the con-

*The problems of organization and management which confront a company doing an annual business in excess of \$350,000,000 would, in any circumstance, be complex and exacting. When such a business, instead of being conducted within a homogeneous area like the United States, is flung out over the whole world through six major regions and twenty-six operating units reaching ultimately 104 different countries, the complexities and exactions, to beg the question mildly, become rather more complex and exacting still.*

sultative contacts that are the essence of staff effectiveness, and the ability to provide a complete and rounded structure was hence almost entirely lacking. This fact may explain the transience of all but the most rugged and humanly capable of world-wide enterprises in the past. With the advent of the age of communications, however, and its provision of the telephone, the telegraph, the radio, the motor car, the swift ocean liner and the airplane, there has been made available to us for the first time the ability to create and maintain an organization, conceived and given effectiveness on the line and staff principle, that is at once extensive and intensive. The opportunities for staff counsel existing in an export enterprise fall short of those available domestically, of course, but the need for utilization of the principle is even more impelling, and we can really thank the age of communications for having put into our hands this weapon which all of us, working over great distances of space and time, so sorely require.

We have adopted the line and staff principle in our General Motors Overseas Operations under the conception that it is, whether we deliberately term it so or not, the inevitable means that the head of any business takes to secure the satisfactory discharge of his executive responsibility.

### The Principle of Line and Staff

The line and staff principle of operation permits the General Manager to delegate a large measure of the responsibility and authority for execution to his line officers in the field; it permits him also to delegate a large measure of the responsibility for planning and results

<sup>1</sup> Paper presented at the Annual Conference of The Society for the Advancement of Management, New York, December 9, 1937.

control to the staff officers by his side in New York. The authority and responsibility projected out to the line officers in the field is for all functions of operation in a restricted territory; the responsibility delegated to the staff officers in New York is for a single function of operation in all territories.

The place of the staff in assisting the discharge of executive responsibility, which is our specific topic today, is one which depends for its effectiveness upon close liaison and an unimpeded interchange of ideas, not only as between the staff officer and his immediate line superior, but also as between the staff officer and the line executives in the subordinate organization strata. It is imperative, in this connection, that the available media of communication be used to the utmost consistent with a proper regard for considerations of expense. Unless he has ready access to the required sources of information; unless, when he has digested this information, he can make his interpretation of it quickly available both upward and downward in the organization, the staff officer's authority—which is an authority of ideas essentially—will never be adequately exercised. To the end that this freedom of communication may exist, it is our policy in the General Motors overseas organization to make frequent use of the transatlantic telephone and cables; to insist that the staff officers, as well as the line officers themselves, shall travel periodically between the field and New York; and, in the home office and in each operating unit, to see that regular use is made of the committee as a medium for the interchange of information and advice.

This device of the committee—or, in its further progression from formality to casualness, the "conference," the "meeting," or the plain every-day "huddle"—is an active expression of the basic organization principle of collective staff counsel. It is in every sense desirable so long as it preserves its essential staff characteristics; the danger in its use lies solely in the tendency that frequently exists for the committee to usurp the responsibilities of the line executive himself, or for the line executive to encourage that usurpation. With the exception of an Executive Committee, which may be created to act expressly for the Board of Directors over the authority of the President or the General Manager, all committees are staff bodies pure and simple; they exist as a medium for the easier interchange of information and advice among members of the line and staff; they have their counterpart in the physical aspects of organization communication, in such facilitating devices as the steamship, the radio and the telephone.

The relationship of staff to line in an organization structure is familiar to all of you; it has been discussed many times in your gatherings, and the philosophic principles it involves have been dealt with exhaustively and authoritatively by Mooney and Reiley in their classic book on the "Principles of Organization." I am going to do no more here than set forth briefly four cardinal elements entering into a proper understanding of the relationship between staff and line, and their place in the total organization structure:

1. Line and staff are jointly responsible for performance.

2. A line officer discharges his responsibility by taking direct action; a staff officer discharges his responsibility by furnishing information and advice which he makes available to the line officers unselfishly and without thought of personal credit for the results accomplished.

3. Although staff executives are charged with responsibilities that have to do with internal administrative phases of the work in their own departments, this does not give them direct authority over the line forces in subordinate organization strata, nor does it relieve their line superiors of the final responsibility for the results of their work.

4. The line recognizes the purpose and value of the staff; it makes full use of its advice and assistance, and it may, upon proper occasion, actually delegate authority to it for the full and forceful exercise of its function. In essence, however, the staff must create for itself an "authority of ideas," and must, by competence and tact, obtain and justify the confidence of the line in all levels of the organization.

#### Staff and Functional Relationship

I would like to digress here for a moment to discuss one aspect of the staff principle which has not, in my opinion, been given previously the consideration and definition it deserves.

We all recognize the usual functional specializations into which the work of the staff is commonly classified—the major functions of sales, finance, supply, production, and engineering, with subordinate and dependent functions classified under them in turn. These are severally the specialized services which provide advice and counsel to the management on its operating and executive problems: they are specializations of a nature intimately related to management, and they demand a high degree of co-ordination among themselves; but they are designed, essentially, to serve the line itself and not to

serve each other. A knowledge of what the sales staff is doing for the line is necessary to the engineering staff if the engineering staff itself is to serve the line effectively; but basically, in an organization sense, the sales staff does not serve the engineering staff—it serves the line. These commonly recognized functional services perform in fact a staff service related strictly to *operations*, and I have segregated them in this sense under the name of *operational staff services*.

There is another kind of staff service, however, which might equally be termed “functional” under the broad implication of the term, but which stands in sharp contrast to the operational staffs in the sense that the whole nature of the responsibility involved is a service not only to the line *but also to the staff itself*. This service embraces specifically the functions of public relations, trade association liaison, government contact, employee relations, organization co-ordination, and economic research. On the borderline, but also belonging properly in this category I think, are the additional functions of statistical analysis, legal counsel, and auditing.

These various services relate only by derivation to the actual operating conduct of the business. They could be dispensed with for a day, or a week, or a month, or even longer, and no tangible effect upon the volume of sales or profits would be immediately apparent. I have heard them called the icing on the cake. And the hard-boiled operator who sees an urgent job of selling or production to be done, and who believes that the sun will rise or set in the doing of that job, is likely to be pleasantly scornful of the utility of what he looks upon as “supernumerary” functions. Seldom, in any event, is the delegated staff responsibility for the doing of these jobs given any high degree of dignity, and seldom, too, is the essentially common nature of these jobs recognized to the extent of providing adequate staff co-ordination for their pursuit. It is a paradox that the importance of these functions is often unrecognized by the line head of an organization, but that when such recognition is given, it is given to such a degree that the executive is inclined to go to the opposite extreme of assuming a direct and personal responsibility for their performance.

I classify the responsibilities involved in these related categories under the head of *administrative staff services*, and I contend that their delegation and co-ordination in a staff sense is as necessary to the executive seeking the efficient discharge of his responsibility as the delegation and co-ordination of the operational staff services themselves.

These administrative functions are implicit in all executive responsibility in the same sense that the operational functions are implicit; but they happen by their nature to group themselves into a single intra-related set of responsibilities which the General Manager can delegate for staff pursuit and co-ordination in a class distinct from the others. In effect, the General Manager says to his subordinate line executives: “Do these things for me.” He says to his several operational staff officers: “Help me and my line executives to do these things.” But he says to his administrative staff officer: “Help me and my line executives and the men who are helping me and them—help all of us—to get these things done.”

Essentially, therefore, the nature of these administrative staff functions is an effort in behalf of the organization as a whole, and not merely in behalf of the directly productive and money-making job of execution. Public relations, as the first of the administrative functions cited, affects intimately the future course of the institution as a whole in consequence of the reception it receives from the people at large who are its patrons and who sit in final judgment on its destiny. Trade association liaison is the vitally important means by which the institution reaches the people and the government on a common front with other institutions possessing a similar stake. Government contact, in these days of an awakened social consciousness made vocal through the political medium, is more necessary to the integration of business in the national scheme than it ever has been before. Employee relations are concerned with the whole inner body of the organization, in the person of each of its individual and component parts. Organization co-ordination is the essence of the whole institutional approach to the division of work and the systematic delegation of line and staff responsibility. Economic research concerns itself with a knowledge of the external background against which the total operational activity is projected—it relates directly, of course, to the operating functions themselves, but its conduct is tied in closely with the other administrative staff functions, including most notably the function of government contact.

I have attempted, with this digression, to cover the general nature of the staff and functional relationship to executive responsibility. To summarize it as briefly as possible, this relationship, working in accordance with line and staff principles, involves the responsibility of management for the three basic obligations of planning, execution, and results control, with a large measure of



responsibility for execution in all of its functional aspects delegated territorially to the line executives in the subordinate strata of the organization, and with a large measure of responsibility for both administrative and operational planning and results control delegated functionally for all territories to immediate staff subordinates. The line and staff principle is simply the inevitable means that the executive takes, in his obvious inability to do so personally, to secure the satisfactory discharge of his executive responsibility. It is the means that men have always taken, when they possessed the requisite facilities for communication and contact, to get a job done quickly and well. Whether they have called it by the name of line and staff or not, the principle of delegation for doing and delegation for helping to do has marked man's organization for the division of work since the first orders were shouted for the lifting of a great log, or the first plans laid and carried out for the rearing of a pyramid.

#### Conclusion

Organization, the symbol of man's strength to strive and to conquer, has its origin in the very fact of his own physical weakness. Its enabling force is the extension and multiplication of his basic creative urge through intelligent delegation. Its elemental purpose is that each man shall do, for the common end and the common good, whatever best he can.

We read in the eighteenth chapter of Exodus that Jethro found his son-in-law Moses attempting single-handed to administer the law in Israel. He listened thoughtfully when Moses told him what he was trying to do and then he said,

"The thing that thou doest is not good. Thou wilt surely wear away, both thou and this people that is with thee: for this thing is too heavy for thee; thou art not able to perform it thyself alone.

"Hearken now unto my voice, I will give thee counsel. . . . Thou shalt teach them ordinances and laws, and shalt show them the way wherein they must walk, and the work that they must do.

"Moreover thou shalt provide out of all the people able men, such as fear God, men of truth, hating covetousness, and place such over them, to be rulers of thousands and rulers of hundreds, rulers of fifties and rulers of tens.

"And let them judge the people at all seasons: and it shall be that every great matter they shall bring unto thee, but every small matter they shall judge themselves.

So shall it be easier for thyself, and they shall bear the burden with thee."

I think Jethro has answered most of our questions for us: he has drawn a typical distinction between the functions of Administration and Management; he has insisted upon the proper qualifications in the personnel chosen to run a business; he has pointed out the need for delegation, and for the division of work. He omitted just one admonition in the admirable advice he gave to Moses: he said nothing about the need for co-ordination through staff service. And that, I think, is the chief element of progress that we have made in the science of management during the past three thousand years.

#### Discussion

**Harry Arthur Hopf.**<sup>1</sup> Dr. Dimock deals in theoretical but scholarly and, therefore, penetrating manner with one of the most important problems confronting our people today; Mr. Smith, with whom it was my good fortune to be associated for discussional purposes on another occasion, now several years ago, presents, on the basis of conditions in effect in that admirable example of practical organization, the General Motors Export Company, a delineation of principles and points of view with respect to organization which have been applied with entire success in that institution.

The picture unfolded by Dr. Dimock in the opening pages of his address, concerning the responsibilities of the President of the United States, is one with which all students of government are familiar. Every single President during the last thirty years has himself voiced the opinion that his executive burden is too great for any single man to bear. Unfortunately, the difficulties standing in the way of governmental reorganization are so great as to preclude the assumption that permanent relief, along the lines advocated by Dr. Dimock, is likely to be furnished within a measurable period of time. With the greatest sympathy for the aims of the present Chief Executive's Committee on Administrative Management, and with full appreciation of the quality of the recommendations for governmental reorganization presented by that committee in its recent report to President Roosevelt, anyone conversant with conditions in Washington is bound to be pessimistic regarding their ultimate fate.

When Dr. Dimock speaks of a limit to the executive

<sup>1</sup> Deputy President of the International Committee of Scientific Management; Vice-President of the Society for the Advancement of Management, and Managing Partner of Hopf, Kent, Willard & Company, Management Engineers and Accountants, New York and Boston.

capacity of even the greatest genius, he evokes a strong response of agreement. After a generation of study of chief executives in many different fields of human endeavor, both here and abroad, it is my considered judgment that in many instances which have come under my personal observation, they defeated themselves in the end, while striving to attain their objectives, by reason of the fact that they were unable to organize, coordinate and control the results of their planning. It will remain eternally true that no organized undertaking can long maintain itself upon levels much beyond those which, according to the combined capacity of its executives, it is entitled to occupy. When the factor of great and increasing size supervenes, it requires extraordinary ability and vision to understand and to cope with the conditions of increasing complexity which are its inevitable concomitants. Ultimately, it is almost invariably the experience of growing organizations to find control more and more difficult of accomplishment; thus, it becomes their fate to pass through the area of the optimum into a period of diminishing returns.<sup>2</sup>

What has challenged my greatest interest in Dr. Dimock's paper, is his illuminating discussion of the *span of control*. He is at pains to point out that, in dealing with the principle involved, there has been a tendency on the part of various students of organization to assume that some virtue attaches to a determination of the number of those who, in a given set of circumstances, may be brought effectively under the span of control. Since he credits the distinguished French engineer, Henri Fayol, with the statement that, "a Minister has twenty assistants where the Administrative Theory says that a manager at the head of a big undertaking should not have more than five or six," it may not be inappropriate for me to give expression to a belief which I have held ever since, a dozen or more years ago, it was my good fortune to have the opportunity of becoming thoroughly acquainted with Fayol's *chef d'oeuvre*, "Administration Industrielle et Générale."

In this book, there will be found perhaps the most penetrating, authoritative and persuasive analysis of the operations that occur in a business, discoverable in the literature of the twentieth century. Fayol places these at six in number: technical, commercial, financial, security, accounting and administrative operations. While it is not susceptible of proof, and Fayol's son, with whom I discussed the matter in Paris several years ago, could not from his own knowledge of his father's

mode of thought shed any light upon the question, I have nevertheless come to believe that the fact that the analysis here alluded to resulted in the disclosure of six operations, exercised a preponderant influence over Fayol's determination of the maximum number of assistants to be included in the span of control.

My own position with respect to this problem may be readily summarized. In practice, as has been borne in upon me from close observation, the extent of the span of control is determined almost wholly by the mental outlook, habits of thought and action, and capacity for organization, possessed by the person charged with the responsibility of exercising control. Some executives express themselves vertically, others horizontally. By the use of these two terms I wish to convey a picture of the tendency of certain top executives to descend, in thought and action, deeply into one or more of the functions, or operations, of the organization over whose destinies they preside, as contrasted with the tendency of others to remain permanently on levels of thought and action co-extensive with the entire area of the organization. In the former set of circumstances, it becomes difficult for the executive to exercise effective control over more than two or three immediate subordinates; in the latter, he appears, in practice, to have no difficulty in dealing soundly with many times the number. The essential consideration to be observed in both cases is the imperative need which faces a top executive always to remember that his task involves the determination, application and control of institutional policies, and that his time and strength should be conserved for coping successfully with these, leaving it to his subordinates to address themselves to the performance of responsibilities on lower levels of the organization.

Since my time is limited, permit me to leave Dr. Dimock's scholarly paper with these few references, and to turn to Mr. Smith's case study of the institution with which he is connected. Planning, execution and results control, he defines as the three basic obligations which are assigned to the responsibility of management. This juxtaposition of concepts is of all-embracing character; indeed, Mr. Smith, without sacrificing anything to clarity and comprehensiveness, has succeeded, admirably I believe, in shortening Fayol's classic statement of the functions of administration (*prévoyance, organisation, commandement, coordination et contrôle*) in a manner that may prove to be of genuine help to the student.

In delineating the line and staff principle as it has

(Continued on page 57)

<sup>2</sup> Vid. Harry Arthur Hopf: *Management and the Optimum*, Proceedings of the Sixth International Congress of Scientific Management, London, England, 1935.

# Realistic Training in Personnel Relations<sup>1</sup>

By EDWIN CLYDE ROBBINS

Professor of Industrial Management, Harvard Graduate School of Business Administration, Boston

INSTRUCTORS in personnel relations profess to teach management as it relates to labor, but in far too many instances they consciously or unconsciously build their courses around one of three well-defined *academic* concepts with the result that while the precept is duly emphasized, there is very little realistic labor management incorporated in the class work.

If the course is taught in an economics department, its structure is said to rest upon certain economic principles. Actually, however, the instructor seldom gets beyond the stage of reiterating from time to time that personnel work must be based upon sound economic doctrines. It is assumed that by some legerdemain the constant re-statement of this thesis is sufficient to enable students to co-ordinate abstract economic theory and realistic day-to-day technical procedure. Frankly, I regard persons who teach in this manner as intellectual vegetarians—individuals who refuse to gnaw the meat off the bones of reality.

If the course is given in a school of business, the motif is likely to be "How can I handle personnel work so as to increase my earning capacity?" Under such circumstances, emphasis is almost inevitably placed upon form of procedure rather than substance. I should say that the outstanding criticism of personnel work as it has been conducted up to the present time has been the worship of form rather than substance. Certainly, no lasting good can result from a further emphasis of this point of view in colleges of business.

If we turn to engineering schools, we find that the concept is essentially mechanistic. The goal in too many of such personnel courses is the development of human robots, a situation where the overseer presses a button and the workers show a green light. If one of them should flash a red light, get rid of him and get a man who will show a green light.

There is a fourth concept in the making in those

*As teachers of personnel administration, we must give increasing consideration to the realities of the society of which we are a part.*

schools of law that are introducing labor law courses.

My contention is that all these concepts have got to be brought down to earth if we are to have a realistic approach

to the problems of labor management, particularly of organized labor.

How often these days one hears sincere, God-fearing businessmen say, "I just don't understand what all this labor turmoil is about. It doesn't make sense that American workmen should behave as they do. I have always believed that they represented the most enlightened and efficient labor force in the world. I no longer know what is expected of me as an employer. Obviously, I can't turn my plant over to the employees."

There are four things in particular which, if stressed in personnel courses, might assist in clarifying this foggy atmosphere and would tend to add realism to the discussion of labor matters.

First, we are living in a democracy. This democracy revolves around certain fundamental concepts which rightly or wrongly we have always held dear, but the full repercussions of which we have never fully appreciated.

We believe, for instance, in public education. We have assumed that an educated labor force is not only more efficient but is also more discerning and reasonable than an uneducated force. That assumption may or may not be true. The fact is that the public school system has created a worker who has aspirations for a far higher standard of living than has ever been dreamed of before—a worker who is willing to assert himself and fight for what he wants, and who will attempt by political means to improve his condition. It is the product of our public school system and not emissaries from Russia that is giving the American employer headaches these days.

Freedom of speech, coupled with ease of communication, has speeded up democratic processes. Fifty years ago, if a labor leader harangued forty men, it was a good night's work. Twenty-five years ago, if he spoke to four thousand it was epoch-making. Yet if John L.

<sup>1</sup> Paper presented at the annual luncheon of Teachers of Management, The Society for the Advancement of Management, December 10, 1937.



Lewis were to announce that tomorrow night he would talk over a nation-wide hookup on a matter of vital importance to the American people, his audience probably would range somewhere from four to forty million citizens.

It should be patent that the forces of democracy cannot be developed in a nation without having profound effect on its industrial life. It is not possible to have growing democracy in social, religious, and political affairs and retain autocracy in industrial matters. It is inevitable that the worker will carry his democratic concepts to the place where he thinks they are most needed. In fact, democracy is rather futile for him unless he can do this.

And this brings us to the second point that a realistic course in personnel relations must incorporate. If what I have said about democratic forces is at all correct, it follows inevitably that we shall witness increasing participation of government in business matters for we have democratic control in political affairs. We have already reached a stage where the vote of the laborer has a real economic value. The Wagner Act, the Social Security Act, the Norris-La Guardia Act, the pending wages and hours measure are typical of what may be expected in the future in the field of labor legislation.

A course in personnel which confines itself to saying that such measures are unsound, or which limits itself to endeavoring to outwit or demolish them, is not being realistic. The fundamental fact is that we are headed for increased participation by government. The form which that participation takes, while of grave importance, is secondary to the main trend.

A third basic consideration is that human beings are more often controlled by emotions than by logic. Human behavior is a curious thing. We usually decide what we want on an emotional basis and then rationalize ourselves into that position. This means that we are never intellectually prepared for anything. Opponents of the New Deal say we are not prepared for it. That is true. Opponents of nationalization say we are not prepared for it. That also is true. Opponents of enlightened capitalism could also say we are not prepared for that, either. With human nature as it is, we are never logically prepared for anything. The history of personnel relations is one long story of unpreparedness between employer and employee.

A great deal of the time and effort in colleges is spent in teaching students to be logical in their thought processes. No one can gainsay its importance, but actual decisions in life are a mixture of logical and nonlogical

thought processes, and it is very doubtful if all the educational institutions in Christendom can greatly alter human nature in that respect. In the field of labor management, the importance of nonlogical thought processes is fundamental. The economist with his premises, the businessman with his plans for rigid managerial control, and the engineer with his slide rule are admittedly important, but they are very unrealistic devices for measuring how human beings behave; especially so when these human beings are banded together in definitely organized groups.

Lastly, in this modern society where democracy is on the march, where political government is steadily extending control over social and economic activities, and where citizens are coming to conclusions by a combination of logical and nonlogical thought processes, we are operating under the profit motive. The question is how can each get the largest profit? Actually, however, we have reached a stage of development in our industrial system where in order to perpetuate profit, we no longer hunt as individuals, but in packs. Employers are associated together to hold their gains; laborers are organized to secure a greater share of what is produced; farmers are banded together for mutual protection; and on the horizon one can see plenty of signs that the organization of the so-called middle class—the white-collar workers, has already begun. We still operate under a profit system, but it is one wherein profit is the result of group action rather than of individual effort.

To restate my point of view, let me say that I have no quarrel with the economic, the business, the engineering, and the legal concepts of personnel administration as such. They are all founded on elements of truth but they are primarily academic in character unless they are coupled with the social, economic, and political realities of the world in which we live. The four most important of these realities are: (1) the growth of democracy, (2) the increased participation of government in business matters, (3) the complex nature of human behavior, and (4) the existence of the profit system.

My contention is that as teachers of personnel administration, we must give increasing consideration to the realities of the society of which we are a part. The failure of business to recognize and properly evaluate these realities has been in a considerable measure responsible for the chaotic condition that now exists in the field of personnel relations. If we are to be realistic in our class work, we cannot ignore such realities. They are the basis of sound personnel procedure.

# Multiple Management<sup>1</sup>

By CHARLES P. McCORMICK

President, McCormick & Co., Baltimore

THE subject assigned to me, Multiple Management, is one that cannot be discussed without becoming personal and using personal experiences. I want first to apologize therefore for injecting the personal equation and so many basic and fundamental factors into this discussion.

For forty-five years, Mr. Willoughby M. McCormick, my uncle, had been engaged in building the largest business of its kind in the United States. After his death, in 1932, further expansion became necessary and changes had to be made. The system that my predecessor used was in keeping with the times—somewhat autocratic, rather demanding, forceful and persuasive, and with a vast amount of detailed work. He had to keep in constant touch with every phase of the business and up to a year or so before his passing, the business had not grown to the extent where it was impossible for him to watch it from every angle. There comes a time, however, when a business can no longer be supervised by one man alone if it is to continue to expand and prosper.

Through my seventeen years' apprenticeship in the factory, on the road, in foreign as well as domestic sales work, in office routine and executive duties, I had laid plans as to what I would do if given the opportunity to succeed my uncle. While realizing full well that the organization behind him was a splendid one, that the business was sound, and our products of the highest quality, there was, however, one drawback, namely, the feeling on the part of the younger men in the organization that promotion could come only through the passing of a senior director.

Our potential factory executive was nothing more or less than a foreman with power over a few employees under him but himself under the direction of the "front office." The sales force, while a good one, was going its own way and finding its own best methods of distribution, merchandising and advertising. This might give my listeners the wrong impression, make them think it was a disorganized business. Such was not the case.

*How one firm with intelligent leadership solved the problem of employee representation in management.*

But it was too highly centralized. All moves were subject to the decision of the genius at the head of the business. If he was right (and he was in

most cases) the business prospered. If incorrect in his judgment, the business suffered.

Furthermore, under the one-man-governed business, executive-minded men became "yes" men and allowed the head of the firm to do their thinking for them. I concluded it would be necessary to change the system or else I might find myself in the position (being neither a genius nor a prophet) of making too many decisions that would be harmful to the business. I felt, too, the necessity of building the individual initiative of the personnel.

Having always enjoyed sports, although only playing them moderately well, I tried to put into the business the basic element prevalent in all good football, lacrosse, baseball or other teams—that of making the entire team one of cohesion, co-operation and spirit rather than having one "all American" star and the rest of the team following in his footsteps.

## The Junior Board of Executives

The first break was made in 1932 when we organized the "Junior Board of Executives." The basic principle of this Board was to take all executive-minded men, young or old, who were not on the Senior Board of Directors, and have that group function for the good of the business. We knew that additions to the Senior Board would be necessary in the near future and meanwhile if these Junior Executives could get some schooling, they would be that much ahead of the game when the time came for promotion from the Junior to the Senior Board. They were given power to govern themselves—to discuss, to argue, and to submit all recommendations unanimously approved for ratification by the President or Senior Board.

You will note by this means that one single, constructive, sober-minded individual could prevent any radical action from being recommended. Their action is mini-

<sup>1</sup> Paper presented at the Annual Conference of The Society for the Advancement of Management, New York, December 10, 1937.

mized by their inability to carry out what they recommend, therefore the authority still rests in the hands of the Senior Board of Directors and the Company is protected by receiving only sound recommendations. They were told that they might select sixteen (the by-laws have since been changed in regard to the number) of the best men and elect a chairman and a secretary from the number. Each serves three months, at the end of which time the secretary becomes chairman, and during the months that follow each man in the group has an opportunity to serve as secretary and chairman of the Board. This has taught them parliamentary practice, the rule of the majority, and the elimination of radical ideas because they are discussed and criticized by men of their own age. But they are given perfect freedom to let off steam and discuss anything pertaining to the business.

Under the Charter the President of the Company is an ex officio member of the Board, but he rarely attends any of the meetings because of the desire to have the Junior Board govern itself and feel independent in thought and action.

#### **The Factory Executive's Board**

At the time we formed the Junior Board, we did practically the same thing with the factory people by taking the factory-minded individuals in the plant, some of them foremen, some mechanics, some plant superintendents, and some chemists, and organizing the Factory Executive's Board. Their duties are strictly concerned with factory problems. They likewise are given the same freedom of speech on all factory subjects—the same limitations and restrictions—that of unanimous approval of any suggestion with the understanding that such recommendation must be placed in the hands of the President or Senior Board of Directors for approval.

#### **The Sales Board**

The third step—the McCormick Sales Board—will not require much time to discuss because it is patterned after the general sales board plan so well known in different industries, with one exception. We want our 225 salesmen on the road to have representation in our business. Already we had the Senior Board which might be considered the holding company or active body of the organization; the Junior executive-minded men and the Factory executive-minded men, so the only remaining outlet was sales and advertising employees.

Therefore out of the original board of twenty, we set up seven as the number to be elected semi-annually from the sales force to the sales board, which meets twice a year, for a week at a time to discuss merchandising and advertising problems. These men are selected annually through merit and efficient handling of their work. It matters not whether he is a retail salesman, a jobbing salesman or a division manager. We are interested in getting only the seven best men on the board. We have them come in twice a year and learn the set-up, the ideals and policies of all phases of the business. Naturally those of you who know salesmen will realize that the average salesman is a poor executive, but he can be developed into a good executive the same as a machinist in the plant can be taught to think in terms of executive duties in the factory. We give them factual information (no "bologna") about conditions which they should study, then they make the recommendations. We hold nothing back from the board for they are our governing bodies.

#### **The Advantages to Employee**

It is remarkable what these three boards have been able to do in changing the general aspect of our business. There is no question now about where a youth can get promotion. Every youth has an opportunity to show what he has in competition with men of like age and energy. The factory man, through his board, has the opportunity to study at first hand labor costs, wages and hours, and the necessity of making a profit when all three are patched together. Multiple Management has changed the atmosphere of our business in such a way that we no longer have office, factory or sales politics. We are all working for one end and that is the basic element of team play. The question of individual stars has been eliminated entirely from the picture.

Getting back to the Junior Board of Directors which is the most interesting board of the three because it more nearly duplicates the Senior Board than any other, I would like to say that during five years of existence I know of few recommendations that have not been carried out. Meetings are held monthly, lasting from forty minutes to four hours, and covering everything from the buying of expensive equipment to the sponsoring of new employees and teaching them the spirit of the business.

By sponsoring, we mean it is the duty of the Junior Board members individually to take a new employee who shows possibilities and sponsor him for two months. They teach him not only the way to run his business but



the spirit of the business. They show him the possibilities and discuss with him anything that may be on his mind. It may be compared to the Big Brother movement in fraternal or association circles. With this sponsoring, the youngest entered apprentice in the office soon realizes that he is receiving friendly help and heartily approves of Multiple Management after he is absorbed into the organization.

These same Junior Executives recommend the elimination from the business of those who have not the proper qualities, while those found satisfactory are eligible for election to the Junior Board.

In order to keep these three groups from becoming stagnated or political, three active members must be replaced by three new men at the election held every six months, but they can be returned at the next regular election. You can readily see that in the last five years many men have gone on and off the board, all of them knowing what the business is trying to do, the inside policies of the business and the spirit behind the organization. It serves as a stimulus to the entered apprentice until he finally arrives on the Senior Board through merit.

#### **Advantages to the Business**

That the Junior Board of Directors has stimulated the Senior Board is beyond question for I know from my limited experience in business that the older a man gets the more conservative he becomes because of his experience, while the youth (not being hampered by experience) is more willing to take a chance and more likely to open up new fields. Therefore, the best work the Junior Board could do was to relieve the Senior Board for policy making, by taking over many details and less constructive parts of the business that generally fall to the lot of a more mature man.

The Senior Board now looks upon the Junior Board as the proving ground for all policies.

Multiple Management would be fine to put into any business, but it will fail unless the head of the business is willing to delegate the proper power and authority to these boards so that they may demonstrate their aggressiveness and their efficiency. Also if they are not compensated through a bonus plan of some sort similar to the one we have worked out, they will feel that they are just being used as a planning board without being remunerated for their work. It might interest you to know that today whenever bonuses are given, the Senior Board member receives exactly twice as many dollars as

the Junior and Factory Board member receives. I believe this is sound because you will note that we have a policy which they understand clearly. There is nothing discussed under the table in our business. Everything is on the table. In this method of management we desire to have a group rather than an individual pass on recommendations.

#### **Happiness and Efficiency**

There is a principle in Multiple Management that is applicable to all businesses. How it should be applied has to be determined by the management. The larger the business, the larger the problem. The fundamental principle of Multiple Management is to promote efficiency and happiness in one's work, and with the management from the top down in accord with taking steps to achieve this principle or goal, the problem will be solved and will bring about greater co-ordination between the two factors of business which should work hand in hand—capital and labor—for they are both after the same objective.

I have always had before me the thought that basically there is little difference between an officer and a worker. One has had more advantages, as far as the business is concerned, has progressed to a greater degree and attained a higher position for which he is paid. On the other hand, this same executive as compared with the worker, has a common ground as an individual. He has a family, a home, a creed, and the objective of both in life is happiness. That spirit will prevail under Multiple Management. But in order to insure its success, the management from top to bottom, as mentioned before, must be in full accord with this principle.

There are many other safeguards that have been set up but which will not be discussed for lack of time and because they would become tiresome. Therefore I am hastily giving you a general synopsis of Multiple Management. But let us just note the difference from the old method of announcing a raise in wages. The president of the concern writes to his plant manager, who in turn notifies the foremen. The foremen are asked to transmit it properly to employees. Here under Multiple Management, the factory executives take charge of our factory meetings, which are held once a month. The Chairman of the Factory Board at that time clearly announces the wage change or any other policy affecting the factory end of the business. The Factory Executives are the ones to whom the factory people look for guidance, and it is up to them to study their personnel,

to get close to them, to learn their wants, and properly translate management (or capital whatever you wish to term it) to employees under their guidance. I can tell you without fear of contradiction that we have had neither labor trouble nor any discussion of labor problems for our factory executives do not hesitate to discuss their problems at these monthly meetings in their own words, which are always sincere and are taken in a far better spirit than if coming from a man off in the "front office" or some high official of the firm.

Of course there is a social angle to our business which is worth while because we are not as large as many other businesses based on number of employees. At regular intervals we have three board parties under the management of a committee appointed from the boards.

Someone will rightly ask, "has it improved the profits of the business?" My answer to that is: it has enabled us to adopt a minimum wage scale for unskilled labor which is more than double what it was in 1929—our former peak. For several years we have had a forty-hour week, a week's vacation with pay for every factory employee, seven additional holidays with pay throughout the year, two rest periods of ten minutes each every day during which time every employee is required to leave his desk, his machine or his department. During these periods, employees refresh themselves with a cup of tea—hot or cold according to the weather—served free of cost. We have been able to give bonuses, increasing the amount each year for the last five years, while salaries are higher than they were even in 1929. In other words, we have reversed the order in which this management previously considered various phases of business. Be-

fore, the products were first, stockholders second and employees third. Today products are still first, but employees are second and stockholders third.

I'll admit that at the end of the year, Multiple Management may not have quite as much money left in the coffers for surplus account as under the old system, but we have been able to pay our common stockholders as much as in past years and have maintained dividends on our preferred stock also. I am not reciting these facts in a boastful spirit, but am just submitting our case to show that Multiple Management can teach every individual to take pride in his business—for it unquestionably teaches every individual to find pleasure in his work for he will be recognized according to his productive ability. We do not have the piece work system. It is not necessary with the spirit of willingness and the happiness (may I emphasize this) found in the work. Each employee knows that under "Multiple Management" he will get the following:

- 1 Fair treatment.
- 2 Decent working hours and a living wage proportionate with the times.
- 3 An opportunity to go higher based on merit.
- 4 An opportunity to know those in the business and get encouragement from them.

It is not unfair to state, I think, that under this original and carefully thought out plan of work, we have arrived at a co-operative type of business without sacrificing our rights and privileges as owners. We still retain the respect and friendliness of the employees.

*Harper Brothers will release a book on "Multiple Management" by Mr. McCormick in January, 1938.*

### Some Advice to Labor Unions

(Continued from page 4)

social usefulness and success may be forthcoming. For if we are to continue on our democratic path, we must more and more bring the mass of our citizens and workers responsibly into the play.

#### The Need for Responsibility

A fact which bears importantly on this is that very few people either in the ranks of labor or outside of them, really wish to assume or are able to assume broad responsibilities. The work of the future will be to teach

people to be eager to assume responsibility and to co-operate effectually. This cannot be brought about unless the worker is inspired with joy in his task.

In the face of such a situation, and opportunity, there is no escape from the further fact that the Captain—and I mean captain, a capital "C" captain—whether of industry or of government, must necessarily be the man who loves, and loving, understands, and understanding, builds and leads and inspires great numbers of his fellows.

# Developing Leaders Through the Conference Method<sup>1</sup>

By HENRY C. METCALF

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IN THE Preface to the third edition to our volume on Personnel Administration (1933), Mr. Tead and I wrote that, with the pioneering period over and the case for personnel management proved, the real problem confronting business is: "Under what conditions of

personal attitude and of economic and corporate organization are people likely to be disposed to work happily and to best advantage together in creating the goods that we all need?" In attempting to center attention on the aspects of personnel work which seem closest to the core of this problem we concluded that the following matters require most urgent attention and constructive thinking:

First, there is the increasing importance attached to providing reasonable security of employment and livelihood for all.

Second, there is wide interest in fostering better education and training in industry, not merely for improved workmanship but for encouraging the development of all-round and more effective personalities.

Third, there is wider and wider acknowledgment that the principle of the representation of the different interests involved in deliberations on policy should be applied in industrial and corporate government.

Fourth, more and more people are willing to admit that the support of the rank and file in helping to realize the objectives of a corporation can be expected only when those objectives are broad, sound, and inclusive enough to make it likely that the workers will feel safe and benefited by espousing them.

Finally, if industry wants genuine co-operation from all members of a working group, it has now become plain that a price must be paid—the price of admitting them as more nearly equal partners in the conduct of the enterprise. How that fact of partnership shall be given concrete expression is one of the most provocative issues of our generation.

I have quoted these points because it strikes me as significant that they forecasted so accurately the subsequently revealed philosophy and intent of the legislation

*The kind of education needed today is through the conference method. Through this method, all the components in an organization will have an opportunity to display leadership and to contribute valuable thoughts to the development of company policies.*

of the Federal Administration which had just come into power when this volume was turned off the press. It is the second, the interest in education and training in industry, to which I have been asked to give special attention today. But that can only be done by

relating it to the other trends mentioned.

## What Do We Want?

We are unquestionably in the midst of a revolution which is transforming the character of our economic life and social relations, and changing the powers and responsibilities of the government toward business and of business toward the community in which it operates. As a result of the complex forces responsible for the rapid changes we are experiencing, certain world-wide, insistent demands that will not down are clearly before all advanced nations. These demands are:

1. the assurance and protection of a decent standard of living—food, clothing, shelter, education, health, recreation—for all;
2. the guarantee of personal and social security;
3. the demand for a fair opportunity for self-expression and growth;
4. the demand for fairer dealing and justice in both business and legal relations.

An attempt to secure the fulfillment of these basic human needs has meant a definite struggle between the forces of opposition represented by private interests and the will of society represented by the State in every advanced nation of the world. The economic, political, and social changes that, with increasing acceleration, have taken place throughout the world during the past three decades make it clear that, although we may choose whether we wish to go forward slowly or rapidly, we cannot turn the clock backward. This fact was dramatically brought home to every thinking person by the

<sup>1</sup> Paper presented at the Annual Conference of The Society for the Advancement of Management, New York, December 10, 1937.



sweeping mandate given President Roosevelt in the 1936 election, as well as what happened in the New York City election recently.

The fact is that the machine, and resulting large-scale, complex, rapidly expanding industrial organization with its concentrated power and wealth, have so complicated and unbalanced industrial-social relationships that it has finally become evident that new standards and procedures must be adopted and enforced if industry and the nation are to prosper steadily and happily and long under the existing order.

The most pressing new management problems arise, then, from the size, complexity, speed and related characteristics of modern business units, their effects upon the nature of man, the human desires and motives which the industrial system must provide for, and especially the importance of recognizing individual differences in centering upon the development of personality, with individual liberty and freedom so related to social trusteeship and responsibility that our economic ills may be remedied.

Admittedly, progress in the solution of industrial human relations problems has lagged far behind technological progress. But there is no doubt that now a new philosophy—a new attitude of mind—is beginning to reveal itself in our business and industry, in fact, in the whole world. Whereas, in past generations it might be said that business and industry was not even aware that there was anything they *ought* to be wanting, we have at least progressed to the point of crystallizing in some measure *what* we want, if we have not yet agreed upon the method of *how* to attain it.

What is it, then, that we want? I quote from an analysis by Dr. Harry A. Overstreet:

Apparently—most fundamentally of all—we want scientific and philosophic intelligence applied to business management.

We want intelligence, first of all, as to *what* to produce as well as *how* to produce it. In the second place, we want intelligence as to how to distribute the fruits of production. Finally, we want intelligence as to how to make the entire economic process serve the ends of the fullest possible development of all concerned.

We are aware that such intelligence in management can not be expected to develop automatically, nor can it be guaranteed by the intrusion into business of political government. We know that we can only achieve it by building up individuals with an appropriate point of view and with a training adequate to carry that point of view into effect.

Thus our whole problem of management today really resolves itself into the simple—even if difficult—matter of adopting a new philosophy, and to the training of all concerned so that they may effectively carry out that philosophy.

To say that what is significantly happening in business today is a movement toward a new philosophy is perhaps to say the most fundamental thing that can be said. To change to a new philosophy means to change to a mode of life in which there is a new integrating idea. Really to find and believe in a new integrating idea is to effect the most important modification than can be brought about in one's life or in the life of one's civilization.

I do not minimize the tremendous task confronting business and industry today in their efforts to reach a new philosophic viewpoint. Swinging our heavy, complex business structure around to the new way of thinking and acting is not a simple, quickly-ordered process. It means for all parties concerned plenty of constructive thought and analysis, conference, patience. For, although sound methods and procedures have been worked out generally and applied in some progressive companies, there is no patent formula here which can be followed indiscriminately, with clock-work results. Each industry, each corporation, each company, each plant must do its own human stock-taking, and organize and co-ordinate to suit its particular conditions and needs.

#### Basic Principles of Industrial Self-Government

As Mary P. Follett, America's outstanding woman business philosopher has expressed it, our goal is "freedom through organized relation." The relation of capital and labor in the attainment of a common objective is what gives spirit and meaning to our understanding. A safe superstructure requires a sound foundation, and sound *ideals* and *principles* are the most *practical* life guides. To work effectively together, therefore, the major interests in our business system—promoter-banker-financier, manager, worker, consumer, and the agent of all, the government—must first and foremost arrive at and live up to certain basic principles of industrial self-government. While time does not here permit any great elaboration of these principles, I do want to submit for your consideration as a sound core, a unifying basis of action, the following ten principles of industrial self-government, most of which have a familiar ring, but which I think we must admit have not yet been given a fair chance of application in our work relations. Briefly stated, these principles are:

1. The principle of the recognition of the sacredness of human personality, and its development and growth as the major goal of industry.

2. The basic principle of balance.

3. The principle of equality of opportunity.

4. The principle of the recognition of individual differences.
5. The principle of justice in labor relations.
6. The principle of the representation of interests.
7. The principle of experimentation.
8. The principle of the "inevitability of gradualness."
9. The principle of reward according to worth, according to productivity.
10. The principle of cosmic faith.

With these broad principles as a guide—as the *law* of the employer-employee-consumer-government relationship—the solution of the complex problems now confronting us compels an intellectual adventure of imaginative reconstruction, of scientific analysis, of integrated thinking. Because of the immensity of the task, I cannot overstress the necessity of *research, standard setting, control and co-operation* on an *industry-wide* basis. But, as a foundation for a sound economic structure and effectively regulated industries, each and every industrial concern must have *its own* enlightened *company* attitude and objectives, sound operating and personnel policies, and effective techniques to transmit and interpret these policies and carry them into effect.

#### Co-ordination and Policy Formulation

Our chief hope lies in the fact that the need may be recognized of putting into practice, of vitalizing, terms until recently generally shunted in the business world as something theoretical and highbrow, now coming into common usage—*co-operation, co-ordination, integration, education* (as distinguished from training). Co-ordination—the transmission and interpretation of policies at and between each level—should be tackled as an urgent problem, one of creative challenge.

Workers, technicians and management may have common interests, but when they come together each group has its own way of looking at company policies and problems, and they do not recognize their interests as common ones immediately. At each level there are fears, hopes and real knowledge of the business which must affect and modify policies in process of formation. This is an inevitable result of past experience and organization—or lack of organization. Our attitude is determined by our experience and by the degree of responsibility placed upon us.

The question arises then—given a more or less different viewpoint at each level of responsibility, how best get people to collaborate, to see the picture as a whole and to weld their ideas about it into a common

view. The ability to collaborate is the ability to get the point of view at each level—what people want—connected up with what they know. Employees cannot feel that it is not good business for the company to pay higher wages if they do not know the financial status of the company. The degree of willing and eager participation expressed by the employees of a given company is dependent upon the nature of the desires they develop, based upon what they know.

Approaching the problem of sound policy determination, the following questions arise: Where does policy-making start? Whom do new policies affect? Who should be parties to policy-making? How do staff recommendations on policy get themselves adopted by the line officers? How does the knowledge desired get transmitted up and down? How is policy measured and evaluated?

The principle to be invoked here is that effective co-ordination requires that *every functional group involved in carrying out a policy be represented in deliberations where the policy and the general methods of its execution are decided.*

Negatively speaking, there are psychological hazards to disregarding this principle, of which we see many examples today—hazards of misunderstanding, flat disagreement, sullen or uninformed submission. Failure to get facts before the people affected results in failure to get agreement. Only through group deliberation is it possible to get different points of view about the same things brought forward, and thus to assure in advance the willing and hearty agreement of all members necessary to giving a policy effect. Men do not take well to a summary notice on the bulletin board. The process of pooling ideas stimulates willingness to come along with what is decided.

The problem is to see that every point of view is taken into account, that all such views are reconciled, that the interests of the organization *as a whole* are advanced. The objective is definite, conscious, affirmative, informed adherence in advance by all concerned to the *purpose and working methods* of the organization. Representation of all interests in conference, leading to integration, is the *means*. The effectiveness of the conference way is not measured by speed in settlement. Understanding does not come in a moment. Better one agreement built upon confidence than a hundred on the shaky walls of compromise or coercion. Never was the truth of this statement more apparent than today.

The larger the business, the more difficult is the problem of relating functions and staffs through sound

organizational structure and conference procedure. In this relating, co-ordinating, process, there are five administrative levels generally which must be included:

1. the board of directors;
2. the top administrative group (*i.e.*, the major staff department heads and general managers);
3. the heads of line departments and of lesser staff divisions;
4. the technicians within a special staff division;
5. the workers in all the line departments (the rank and file).

American industry has been built up primarily on individual initiative and individual leadership. When businesses were small and the relations between owners and their few workers personal, the owner-management had little difficulty in acquainting the work force with the policy guiding the common effort. Formal conference techniques were not needed to keep the business going on a basis of mutual understanding, good will and co-operation.

But during the period of tremendous increase in size, complexity and speed and the diffusion of ownership, the organization of thought and machinery for keeping the workers fully informed and getting their active, informed consent has in no way kept pace with the methods put into effect for increasing production, for instance. We are finding today that some corporations have grown too large and unwieldy to have a unifying "personality." Management is too far removed from the workers, in a complex structure with many overlappings.

Add to these facts the appalling results of overspecialization and canalized thinking which we suffered during the depression and our efforts to get out of it and forestall; and the fact is driven home with increasing force that we are in "a race between education and catastrophe," that our greatest need today is education in its fullest meaning, given expression in a well-integrated education and training program built upon the conference idea—the life blood of an organic industrial relations program. And there probably never before has been a time in our history when so many executives and employees of companies in this country were taking an active part in such education and training programs.

#### What Is Education?

We are realizing that education must be a continuous life process, reminding us always *how to search out the*

*true facts* which determine "the law of the situation" and *how to think*, rather than *what to think on the basis of one-sided facts* propagating self-interest and bias. Education is a process of leading forth, of guiding. The term connotes broad, fundamental concepts, implying the development of the physical, intellectual, and moral faculties. Education implies *knowledge, skill, discipline of character*.

Too often "education" and "training," or instruction, are used synonymously. "Education" is the far more comprehensive and meaningful term. The great Italian patriot, Mazzini, has well expressed the distinction as follows:

*Education is addressed to the moral faculties; instruction to the intellectual.* The first develops in man the knowledge of his duties; the second makes him capable of fulfilling them. Without instruction, education would be too often ineffective; without education, instruction would be a lever lacking a fulcrum.

The meaning of education such as we need to acquire in the home, in the school, in government, on the job, but with especial stress here in the top executive ranks of industry is well given in the words of the late President Hibben, of Princeton University:

In the process of education there are three stages: the first is that of *Knowledge*, the gathering of information from the great world of knowledge—what men have thought and felt and achieved, so that one may come to understand the world in which he lives. The world of the present can never be understood, however, without a profound knowledge also of the world of the past.

But knowledge as mere encyclopaedic information is only the beginning of education. The second stage is that of *Understanding*, the ability to relate all items of knowledge, the ordering of the material elements of any subject, of discrimination between that which is relevant and that which is unessential, and above all the ability to detect the universal operation throughout all the various separate items of knowledge, the work of the universal law of cause and effect. Knowledge can be gained by memory alone but understanding only by reason. Many centuries ago Aristotle said, "There are two classes of mankind, the one who know facts, the other who understand the causes of these facts; the latter are the true philosophers, follow them."

The Third element in the process of education is that of *Wisdom*, the ability to use the product of knowledge and of understanding so as to apply it to the attainment of desired ends; it is knowledge and understanding made dynamic; it is intellectual power in action; but even more than that wisdom consists not merely in the skillful adaptation of means to ends but also an evaluation of ends in themselves. The wise man must discriminate between the end that is worth the effort to attain, or of secondary significance, or in themselves basely ignoble.



### Education Through Conference

The kind of education needed today is through the conference method which will effect the necessary co-ordination. And in the educational processing called for, the essential first step seems clear. The beginnings must be made in the ranks of *top executives*. Only when those who are responsible in the last analysis for our industrial direction come to recognize the necessity for and importance of systematic education and training programs for themselves and their coexecutives, and are willing to set up systematic schedules for learning, and require the same care in their execution that they demand in their daily *doings*, will the necessary results be achieved. If education and training is good business then it should be put on a business basis, the same as any other business problem. This needed executive manpower is not alone an individual problem; it is clearly a group problem and an "organization power" problem. It calls for a clear-cut program of thinking, of research, analysis, reflection and learning.

As the result of encouraging experience in two companies with which I have been associated, Servel, Incorporated, and the Hood Rubber Company, I recommend a conference program which begins at the top, with top management functioning as an Executive Personnel Advisory Board. The membership of such a board should include the President and the heads of the major departments. This Board should devote much thought to the formulation, interpretation, transmission, execution and measurement of the over-all policies of a well integrated *company* industrial relations program. It should consider the important question which I stressed—how is company policy best co-ordinated at each operating level and transmitted from one level to another? Management here has a two-fold objective:

1. To provide organized structures of conference or communication in and through which interchange of ideas takes place. This is the *organizational* aspect of the problem.
2. To vitalize the operation of this machinery of interchange so that there is a real meeting of minds, a harmonizing of desires and an integrating of objectives *in advance of action*, so far as possible. This is the *educational and psychological* aspect of the problem.

It must always be borne in mind, of course, that structures for co-ordination in such representative conferences are but the outward evidence of an inner disposition to collaborate in sincere, effective ways.

After these major problems of policy and co-ordina-

tion have been determined, the Executive Personnel Advisory Board has the function of relating (1) production and personnel policies, (2) sales and personnel policies, and (3) financial and personnel policies.

To complete this organizational set-up providing for effective horizontal and vertical co-ordination, there should be a similar guiding board or committee, at each operating level, taking part in well-organized and directed educational conferences.

With this background in mind, I am sure you will find interesting a description of the application of this technique in these two companies. At this stage of our industrial relations evolution, work of this nature presents the greatest challenge and promise of the greatest satisfaction to those of us who have spent a long life trying to understand these complex industrial human relations problems.

### Hood Rubber Company Educational Conferences for Top Executives

About two years ago I was delighted to get a call from an executive who has done a better job than most in keeping abreast of the times in his thinking. I refer to Mr. Arthur Newhall, who heads the Hood Rubber Company of Watertown, Massachusetts; his suggestion was that I come up to their plant once a month and give him and his coexecutives my conception of what top management should be thinking about in these times.

The Hood Rubber Company of course rates high in its organizational set-up and procedures. And Mr. Newhall made it clear to me that my job was not to try to tell these executives anything about the technical details of their respective jobs. What they felt they needed and wanted was to be given a perspective, an understanding of the economic-social changes which are obviously taking place, why they had been forced upon us, and what adjustments—physical, mental and spiritual—were necessary in order to be fitted to operate successfully under the new state of affairs. In other words, they wanted education as opposed to training—education in the sense of the Hibben and Mazzini definitions.

A full morning each month was set aside for a series of most stimulating and mutually helpful organized round-table conferences. We discussed the nature of man, his place as an industrial citizen, relationships and balance, the new social responsibilities of industrial management, and the present and prospective rôle of government in the picture. A carefully thought-out out-

line was sent on in advance for consideration by each group member, and one of the group members acting as secretary wrote up a digest of each meeting, which was duplicated for a permanent record for each of the group members. Each one of these executives—responsible for production, sales, standards, finance and industrial relations—had interesting contributions to make to our discussion, both because of the inherent differences in individuals and the result of their varied education, training and experience.

The cumulative result was a broadened interest and perspective and understanding of the complex interrelationships involved in their respective functions both within the plant and in relation to the outside world.

#### **A Comprehensive Educational Conference Program at Servel, Inc.**

Mr. Louis Ruthenburg took over the reins at Servel not many years ago with a keen realization of the complexities of his problems and the vital need for education in industry respecting industrial relations. The way he felt about it was expressed in the following statement, concluding an address which he made last year before the National Metal Trades Association:

We are beginning to learn that sales records, competitive position, profit and loss statements and balance sheets are not matters of primary importance in industry. Underlying such secondary results is the human equation, and these matters which we have so long regarded as things of primary importance are simply measures of the degree to which management has solved the problem of industrial co-operation.

At Servel, with a comprehensive foreman and group leader training program already in operation, beginning in the fall of 1935 we developed the group conference method for educational purposes at various levels and as a co-ordinating device between the levels. The top group—made up of the President and the Vice Presidents in charge of Production, Engineering, Sales and Finance—met for a half day each month in the executive offices at the plant in Evansville, Indiana, as the Executive Personnel Advisory Board, with an agenda and procedure similar to that of Hood Rubber. But here, as well as discussing the broader economic-social-political developments affecting management, we spent considerable time on the problems of the formulation, interpretation, transmission, execution and measurement of the over-all policies of the company industrial relations program, as well as the relationship of this

internal company program to a sound industrial public relations program.

In this group, questions of functional responsibility, the growing importance in business of science, research, standardized knowledge and experience were discussed. Functional responsibility was definitely stressed as opposed to any ideas of "ultimate authority" or individual control. There was constant emphasis upon the interweaving of function, authority, and responsibility; and an earnest effort made to analyze each situation, to obey the facts disclosed, to recognize conflict at points where it occurs, and to solve the problems where and when they arise. This means that cumulative responsibility based upon research, standards, and co-operative control shall rule.

Going on down the line, on the day following the monthly meeting of the Executive Personnel Advisory Board, the heads of departments which had to do with personnel met as the Personnel Conference Group to discuss equally carefully prepared agenda. This group, headed by the Works Manager who made the liaison between it and the top group, was in addition made up of the personnel director, the educational director, the heads of the engineering and standards departments, the medical director, the service director, and the office manager.

In this group we sketched more cursorily the broader picture, and showed the relationship to and discussed intensively the actual personnel problems of each of these officers, in order to turn the wisdom of the whole group upon them and to work out the troublesome relationship problems.

From time to time the effectiveness of the education and training program was tested by having the group members check to determine whether or not specific improvement had been made in items like the following:

1. Stabilizing business.
2. A better type of applicant.
3. Decreasing labor turnover.
4. Decreasing waste, both in time and materials.
5. Reducing accidents.
6. A better health record, expressed through fewer accidents and steady employment.
7. Improved financial condition of the workers.
8. Increased interest in participation in employee activities.
9. Freedom from labor troubles.
10. Increased production and better quality production.

11. Better co-ordination between those responsible for different parts of the personnel program.

12. Improved community attitude toward the company.

One interesting experiment carried out by this group had far-reaching effects, from the foreman group to the top. The foremen were asked to fill out a questionnaire revealing what they considered (1) their accomplishments during 1935; (2) their weaknesses in 1935; and (3) their plans for improvement in 1936—all with respect to personnel. The answers were charted and summarized.

Reported accomplishments grouped themselves under better administration, improved employment procedures, health and safety provisions, and training and research results.

Reported weaknesses fell into three main categories—personal weaknesses, weaknesses in administration and morale, and weaknesses due to unsatisfactory working conditions.

Plans for improvement the following year again fell into three main groups—(1) Self-improvement, (2) improvement in the functioning of the various personnel divisions, and (3) improved quality and reduced costs.

We studied these results in both the Personnel Executive Advisory Board and the Personnel Conference Group, and we agreed that they led to certain *general conclusions*, which served as a basis for immediate action, one step of which was the commencement of a thorough-going job analysis. You may be interested to hear what these general conclusions were:

1. The need—

a. Clearly defined administrative objectives and policies, particularly in personnel management.

b. A functionalized organization set-up—with an effective system of co-ordination, horizontal and vertical—through which these objectives and policies may be transmitted, interpreted and executed.

c. The development of more aggressive, yet co-operative, leadership for effective team-work.

2. The setting—

An encouraging awareness and recognition of these needs, especially a desire for self-improvement for leadership to meet changing conditions and policies, with the aim of producing quality product with more efficiency and less cost—and a good start in that direction.

3. The method—

a. Fit the man to the job.

b. Continue to improve standards of fair dealing in wages, hours and working conditions and incentive plans in keeping with efficiency and control of cost and quality.

c. Encourage self-analysis, understanding and improvement.

d. Conferences for department and division heads in the interests of interdepartmental co-ordination.

e. Vitalize the education and training program for foremen, group leaders and service groups, so that they will understand and interpret company objectives and policies and instill quality consciousness and team-spirit in the workers.

f. Vitalize the Workers' Council and relate the Employees' Association and various welfare activities, stressing the educational aspect.

4. The anticipated result—

A smoothly-running organization, with an efficient, contented, loyal body of workers.

The comprehensive educational program at Servel, under the direction of Mr. H. L. Humke, also uses the conference method in other groups down the line. I quote from a statement recently prepared by Mr. Humke:

The *Master Methods Groups* are given largely to the training of leaders, but the development of top executives through master sessions is not neglected. Methods of conducting conferences, evaluation of textual material, sampling of proposed conferences and the awakening of top executives and leaders to the particular importance of industrial relations receives much attention.

*Foreman training* is set up with definite objectives accompanied by a series of specific courses planned over a period of years, which courses, it is assumed, will help in the achievement of objectives. The training of this group is tending to take on a rather definite aspect in regard to standards of achievement. Obviously, the use of standards of achievement must be very definitely tied in with a merit program. The establishment and validation of standards and the achievement of a merit program involve extended time for development. Engineering foremen followed the course with the production foremen for the first year.

*Group leaders* at Servel, Inc., compare in position with men in other institutions who may be called assistant foremen, "straw bosses," shift leaders, etc. Leaders of this group, which totals approximately 200 men, are chosen from outstanding foremen. The subject matter followed is the same in title as that used in the regular foremen conferences. This material is presented to the group leaders from six months to a year after it has been presented to the foremen. The group leader program differs from that of the foreman group in two essential points; namely, the group leaders of a single department, sometimes two departments, constitute the study group and these meetings are used as an occasion for very pertinent discussion of shop problems and of safety programs. It is the plan to develop standards as rapidly as possible so that group leaders may be advanced to foremanship positions on a merit basis determined by efficiency of operation in the plant and by success in passing the hurdles set up in connection with the various standards.



There are other groups—a student group, a squad of men studying engineering on a co-operative basis at the University of Cincinnati, and Servel Opportunity School Classes for Employees.

Such an educational conference program, developed at each operating level from top to bottom, should make for "the spread of knowledge," which Mill cites as one test of an advancing civilization.

### The Call for Educated Leadership

I have given these examples of the conference method of education and training in industry, stressing especially the unique value of a top Executive Personnel Advisory Board, because I feel they represent what is most needed today. I am certainly not alone in realizing the great need for educated leadership, for "specialists in generalization." I could give you a long list of quotations from men and women in all sectors of life to bear me out. Here are four, the first from a prominent young industrial leader, the second from a retiring industrial leader, the third and fourth from long-time students and teachers of industrial relations:

Of course, the quest for leaders is as old as the race. But that quest is more active today than ever before in our industrial history. This, I think, is chiefly because many new problems have arisen to create a crying need for a new type of business leader. . . . The crux of the situation is not so much the need for men, nor the scarcity of proven leaders, as it is the failure of American business management generally to introduce an orderly and methodical system for the discovery, development and assignment of executive personnel. (Edward R. Stettinius, Jr., Vice President, U. S. Steel Corporation, in "The Selection and Development of Executives in American Industry," an address delivered at the Harvard Tercentenary, September, 1936.)

The business man and professional man must continually expand his education. . . . Education is a continuous process. It is sometimes acquired instinctively or intuitively. As a general thing education is the result of painstaking application, and involves alertness to recognize everyday opportunities and willingness to take advantage of them. (Carl Raymond Gray, retiring president, Union Pacific Railroad—136th annual commencement of Washington and Jefferson College.)

We have developed scientific research and the training of scientists admirably; we have failed utterly to promote any equivalent educational development directed to the discovery and training of administrators of exceptional capacity. . . . Better methods for the discovery of an administrative elite, better methods of maintaining working morale. The country that first solves these problems will infallibly outstrip the others in the race for stability, security and development. . . . The urgent problem of the present is that our administrative elite has become addict of a few specialist studies and has unduly discounted the human and social aspects of industrial

organization. . . . The universities of the world are admirably equipped for the discovery and training of the specialist in science; but they have not begun to think about the discovery and training of the new administrator. (Elton Mayo, in *The Human Problems of an Industrial Civilization*.)

So we must try to broaden the perspective of the men who are now in business. We must try to make them understand that all business problems are social problems and that the most important ones are national problems. We must try to teach them that specialization in business can go too far; that no man is qualified for business leadership who does not understand the true relation of business to society, and that no price is too high, and no personal sacrifice too great, if it is necessary to obtain that point of view. (Philip Cabot, in "Business—The Servant of Society," *Economic Forum*. Winter, 1936.)

A prime essential to leadership in the necessary program of industrial emancipation is the capacity for *intercreative co-ordination*, which bespeaks (1) social trusteeship responsibility, (2) the long-run view and an understanding of the underlying relationships governing our social-economic life, and (3) adherence to principles and techniques set forth in a code of ethics and rules of governance.

What we are working toward—in the plant, in the company, in the industry, in industry generally and in industry-government relations—is an honest integration of all points of view. It is an inspiring challenge—a nation-wide mobilization of individualities.

Instead of the old method of "power-over" the new leadership uses "power-with." Autocratic dictatorship yields to the principle of functionalization. Each individual hereafter is called upon to contribute in his own way. Increasingly things are to be done *through* him, not *for* him. Persuasion through education, with the leader in the rôle of teacher, takes the place of domination. For leadership, which is fundamentally an educational process, *liberates* human energy, creates power and stimulates growth through the integration of diverse purposes and the intelligent use of individual differences, while domination retains all power and reduces those it controls to puppets and routiners.

As Dr. James A. Bowie puts it in his *Education for Business Management*:

The modern manager is not one who marches well in advance, expecting his staff to follow. He is not a policy maker or co-ordinator merely in the sense of tying together judgments, or interpreting facts arrived at by independent units of his staff. The kind of management that must increasingly be developed in the large units of today is management according to function, with authority all along the line, in contrast to management by the fiat of a central power. The aim should

(Continued on page 53)

# Measured Day Work vs. Wage Incentives<sup>1</sup>

By FREDERICK C. WINTER

Industrial Engineer, Elizabeth, N. J.

**L**ABOR is passing through a crisis unprecedented in history, marked by violent strikes. Emerging from a seemingly interminable depression, the wage earner now feels that he is entitled to a greater share of the profits which he believes his employer is receiving. He fails to realize that these profits must first be earned through greater productivity, and that he, himself, plays an important part in their creation. It is management's rôle to supply the worker with the means and the incentive for greater efficiency, with the happy result that output and wages can be stepped up.

With increased costs, if we desire to get a greater return on our investment, it is imperative that we appraise our present wage payment plan. We must thoroughly analyze each new wage system as it comes to our attention and ascertain where it is an improvement over our own, or where it falls short. Guided by these facts we can alter our present wage plan, or adopt one more suitable to our needs.

A wage plan that will work well under one set of conditions and thus prove equitable to employer and employe alike, might not prove satisfactory in another situation. All plans must be analyzed in the light of local conditions. A plan that will prove to be an incentive to one class of labor, might not obtain the same action from another class. The classes of work in any company vary from highly skilled labor to unskilled labor. The mental outlook and reasoning processes decrease as you go down the labor classification. The wage plan adopted must take into consideration the needs of these several classes. It is therefore quite customary to find more than one wage plan in operation in many companies.

## Measured Day Work

Measured day work is an incentive wage plan made up of two parts: namely, a base rate, and an incentive

*This is the prize-winning paper in the contest on Measured Day Work versus Wage Incentives held recently by The Society for the Advancement of Management.*

rate. The base rate is set after evaluating each class of work and determining its worth. In this process the job is thoroughly analyzed and evaluated in relation to the other jobs in the plant, after considering

such factors as skill, responsibility, working conditions, mental application, physical application, accuracy, dexterity, hazards, learning period, degree of co-ordination required, etc. Then, depending on the prevailing rate of pay for a similar class of work, and on company policy, a base rate of pay is set for the job, which is not changed unless there is a technical change in the method of doing the work, or business conditions and company rate policies warrant it.

The following table<sup>2</sup> shows how three companies evaluate their most highly skilled work, and the factors that they considered necessary for job analysis:

Factor	MAXIMUM EVALUATED POINTS					
	Per		Per		Per	
	Com- pany No. 1	Cent of Total	Com- pany No. 2	Cent of Total	Com- pany No. 3	Cent of Total
Basic points .....	400	33.3	820	33.4	102	33.4
Mentality necessary ..	100	8.3	310	12.6	110	35.8
Skill required .....	400	33.4	596	24.2		
Responsibility involved	100	8.3	82	3.3	40	13.0
Mental application						
required .....	50	4.2	37	1.5	27	8.7
Physical application						
required .....	50	4.2	37	1.5	28	9.1
Working conditions ..	100	8.3	485	19.7		
	1200	100.0	2460	100.0	307	100.0

It will be noted that each company assigns a certain number of "basic points" to the job. This is an arbitrary choice, and usually has some relation to the minimum hourly rate paid in the plant for the most unskilled work.

<sup>1</sup> Paper read at the Annual Conference of The Society for the Advancement of Management, New York, December 10, 1937.

<sup>2</sup> "Measured Day Work," by R. H. Rozitzke, reprinted through the courtesy of *Factory Management and Maintenance*, Vol. 95, No. 2.

Because the factor of production alone does not give the true worth of the employe to the company, the second or incentive rate is added to the base rate, in the case of measured day work. The extent of this added compensation is contingent upon his production, the quality of that production, his versatility and dependability. No incentive allowances are included in the standard times which are determined by time study, past performance, etc.

The weight of these various factors depends upon their relative value to the product, process and company. If the employe meets the best standards of each, he is given the maximum rate of pay for that job, and if he does not meet the best standards, his extra compensation is in accord with his performance. The amount of extra compensation varies from 15 to 25 per cent of the total measured day rate. Some employers believe in a low base rate and a high incentive, while others set a relatively higher base rate and a lesser incentive. This depends upon the means of production or the nature of the process.

In order properly to evaluate the incentive elements for the employe, records must be kept of production, quality and waste. Also, the worker's capacity to learn, his diverse abilities, and his capacity for growth must be made a part of his personal record in order to evaluate the versatility element. The dependability element is evaluated from absentee records. The foreman or supervisor can furnish additional information as to his co-operation, conduct, etc., which are a part of this element.

The incentive rates are reviewed periodically for each employe, depending upon company policy, type of manufacturing and employe relations. The length of this period is generally three months. When first installing the plan it is advisable to review rates every month in order to give each worker his proper differential in relation to the others.

#### Wage Incentive

Nearly every type of wage incentive has been tried out in England or France long before it appears in the United States. The engineers of this country are given credit for many of these plans because they use a finer technique in analyzing jobs. The reason for the failure of these plans prior to our engineers' success is due to improperly estimated, guessed at, or bargained standards. Taylor and those who came after him evaluated the standards by measuring the task and then setting

incentives that were inducements for the worker to do his best.

Under a system of wage incentives the rate or earnings are a result of combining a base rate and a time allowance for doing the job.

The base rate is determined through a job analysis as in the case of measured day work and its worth thus determined. These base rates are guaranteed against revision unless there is a technical change in the method of doing the work, or a radical change in business conditions.

Through the medium of time study, motion study, etc., the job is improved and a fair day's work is determined. Also, allowances are made for such factors as fatigue, personal delay, unavoidable delay, machine delay, etc., as they enter the picture and are included in the standard. In order to induce the worker to produce, an incentive allowance is included in the standard. Its value is in the neighborhood of 20 per cent, but depending upon the base rate, local conditions, and method of production, this figure might be less or greater than that stated. It has been found, generally speaking, that at least a 20 per cent inducement must be used in order to get results. The purpose of any wage incentive is to reduce the total cost of the product, and to pay labor more in order to attain this end. Therefore, the maximum per cent of incentive is that which can be added under a given set of conditions, and not increase the total cost of the product. Usually this will be a high per cent and much more than is necessary.

In any well set up wage incentive plan, the direct labor cost is reduced because the employe's production goes up considerably from doing just enough to get by under time work, to the fair standards that he will attain and surpass because of job improvement and the inducement of a greater earning power. "There are numerous records where direct labor costs have been cut 25% to 70% by means of installation work, total production volume increased up to 300% by the operation of the incentive, and total unit cost cut 20% to 50% by better distribution of overhead."<sup>3</sup>

Some wage incentive plans are designed to improve quality or reduce waste. Better than standard entitles the employe to a bonus. Others are made up with the intention of increasing production or maintaining a uniform output. Some are designed to reduce total unit costs, others to fix a standard labor cost per unit of product. It is not uncommon to find incentive plans

<sup>3</sup> The Cost and Production Handbook, New York, The Ronald Press Company, 1937.



intended to improve production and at the same time, reward through incentive the quality of work turned out, or the most economical use of material. A company using mica sheets affords an illustration of the quantity and waste plans combined. The sheets are produced by splitting up blocks of mica into uniformly thin sheets. If there were no waste check, the employee in his haste to earn a greater bonus would sacrifice a lot of mica. Production is paid on a piece work basis, but the rate varies with the per cent of mica sheets turned in from the blocks. The higher the per cent, the greater the rate. Another illustration is that of a plant barrel plating small fittings. A bonus is paid for the pounds of work turned in above a certain standard. This bonus varies with the number of pounds of Cadmium used per 1000 pounds of fittings. The range is from  $8\frac{1}{4}$  to  $9\frac{1}{4}$  pounds of this metal per 1000 pounds of fittings, and a graded bonus is paid between these limits. These limits are included in order to assure a certain thickness of plating. Also, a penalty is imposed for the number of pounds of fittings found in the bottom of the barrel plating tanks at the end of the bonus period. This plan combines the desirable features of production, quality and waste in one wage incentive plan.

Under most plans quality is maintained and waste controlled either by not paying for bad work, by making the employee recondition it on his own time, if this is possible, or by penalty deductions from the bonus.

With wage incentives, the essence of which is time, the base rates have a maximum and a minimum wage limit. This feature is used to set individual employee rates commensurate with the length of his employ, his versatility and consequently, his usefulness; his dependability, and the quality of his work. This range of rates allows each employee to be appraised on his individual merits thus preventing discord among the workers, and as a result, cuts down labor turnover.

The basis of a fair wage incentive plan is an accurate definition and measurement of the task. Where this is not applicable, as, for example, in estimating standards for jobbing work, seasonal production, or a changing product, a form of bonus sharing plan is in order. Under modern manufacturing conditions where the investment in equipment per man is ever increasing and as a result, there is a greater overhead, it is imperative that we give the worker every incentive to attain his fullest productivity, despite the fact that the task is difficult to measure. Plans that cover these conditions are the Halsey, Rowan, Bath, etc., Wage Incentive plans. The Halsey plan is the simplest, but the Rowan and

Bath plans offer more security to management. These plans increase the hourly earnings of the employee and at the same time reduce the cost per piece.

The foregoing paragraphs will give some idea of the scope of wage incentives and their similarity to measured day work, under which a task is defined and the individual employee's qualifications are taken into consideration in determining his worth.

#### Comparison of Measured Day Work and Wage Incentives

Measured day work is a type of incentive plan that is easily understood by the workmen. He knows that at the end of each pay revision period his hourly rate will be changed in accordance with his performance. As far as he is concerned, there is no difficulty in ascertaining whether the company has paid him the correct wages at the end of the week, as would be the case under some of the more complicated wage incentive plans. The pay check is more uniform from week to week, because for the pay revision period the good and bad days of work are more evenly averaged out. Also, the loss of pay due to a change of work is less than under any other plan. Measured day work gives a man who is skilled on one kind of work a chance to become skilled with another. The employee is not taken off bonus and put on a lower hourly rate when there is a change in machine or operation, until such time as the new operation or method is put into effect and standards set, as would be the case with most wage incentive plans. He continues to receive his regular hourly rate that has been set for that period. This plan is the only one whereby a premium is paid for the operator's versatility, and his pay check is delivered close to the week in which the work being paid for was done.

The average wage incentive plan does not take the degree of quality into consideration as does measured day work. Under the former plan the work that meets the quality requirements is accepted and paid for while that which does not is rejected. This plan broadens the quality concept. A man who turns in better than acceptable quality is rewarded more than a man who hands in work that just gets by.

Those who have applied this plan claim that more accurate standards can be set over a period of years than under any other wage incentive plan. With the passing of time there are improvements made in the method of doing the work, and as the job is made less difficult, the job evaluation would indicate a lesser base rate and changes in it are made accordingly although the

incentive rate would remain the same. It is claimed that as a result of an unchanging incentive rate there is less resistance to methods change, and consequently, the engineers are less hesitant to make them. There is more co-operative relations between employee and employer. Also, in times of retrenchment there is a change made in the base rate only, but the incentive rate remains unchanged.

In the case of automobile manufactures where paced conveyors and automatic machine tools predominate, years of accumulated experience and records make it possible to set dependable standards of performance. Because of the industry's seasonable nature, the worker is induced to meet at least the standards set, so that when lay-offs come he will not be among the first to go.

One main feature of measured day work that adds more scope to the plan is that of job analysis. With the ranking of the jobs and their relative earning power, an avenue of promotion is opened up. The worker with ability has this showing in his incentive rate and when there is an opening further up the ladder he will be a candidate for it. Management, aside from the foreman or supervisor, can select the man for the job. Measured day work requires that supervisors and foremen assume greater responsibility, and therefore, they will be more inclined to plan their work, and thus reduce waste.

Because the incentive rate is from 15 to 25 per cent of the measured day rate and this incentive figure is broken down into several factors; namely, quality, quantity, versatility, dependability, or whatever factors are used, this plan puts a fairly definite limit on the worker's income. For example, if quality is the dominating factor in the product's make-up, its value in the incentive rate is greater than that of the others. There is a fairly definite limit to the "degree" of quality, while the productivity of men varies greatly. It is much harder to set an upper limit for production, and each man should be compensated in accordance with his abilities. The full incentive rate cannot be given to a man only on his producing ability under this plan, for the other factors cut out slices of the incentive rate pie. In short, it leaves no extra wage or no real incentive for surplus performance, where the nature of the job would permit such. Therefore, the employee will work only up to the standard because there is no incentive to go beyond. It will not get the best performance from the best operators, and it might bring about a greater labor turnover among the best men.

Measured day work imposes greater responsibility on management to get out the same amount of work as

under wage incentives. Because of an unlimited earning power under the latter plan the workmen feels that he is in business for himself and consequently, less supervision is required. The overhead per unit of product will be greater with measured day work because the amount of production will be less, due to a smaller degree of incentive, as compared with wage incentives, and the greater amount of supervision required. Therefore, to get the same output as under wage incentives we might say that it is a driving form of wage payment. Where conveyerization or automatic machines are the rule, this might not be the case for these mechanisms set the pace or output.

Measured day work is not as quick to improve the tempo of the workmen. This is due to the fact that the incentive compensation is analyzed every so many months for past performance. The time between cause and effect is too long. The employee is paid in the future for what he has accomplished in the past. As far as management is concerned, there is a lack of wage control. If a man falls down consistently after receiving a good hourly rate, there is a relatively long time passing before his rate can be brought into line with his performance. If more supervision is applied to the workman, and it will be in order to bring his performance up, there is less time for the supervisor to accomplish his other duties. Lastly, there will be some grounds for the employee to question the hourly rate set for him because he knows what he produced, but does not know how the other factors of quality, dependability and responsibility were evaluated in his case.

The amount of payroll and record work will be a little greater for measured day work than for a wage incentive plan because the factors of versatility and dependability have to be evaluated and records kept. The extension of job cards, waste reports, quality reports, etc., would require the same amount of work under either plan. Measured day work provides for a greater degree of payroll work which can be done during slack periods. Rate changes can be staggered in order to avoid accumulated effort and other complications. With wage incentive, under which standards are set in terms of time, there is an advantage when revising rates up or down with business conditions in that it is only necessary to change each employee's hourly rate, and not go over each job and change its base rate, as would be the case with measured day work.

Wherever the production is controlled by the capacity of machines or by conveyerization, the maximum output of the employee is limited and his opportunity to make

his services more valuable to his employer are thus reduced. Measured day work is the ideal form of wage payment and the means of showing an employee's value under these conditions. For this reason the automotive industry uses this plan. On the other hand, the clothing industry favors the piece work class of wage incentive for the employee's output depends largely upon his speed and the efficiency of operation.

Where the work is conveyORIZED or produced by machines each worker must do his share of the work or be shown up by his work piling up or passing by. Measured day work is effective as an incentive under these conditions because the pace of the conveyor or the output of the machine acts as his overseer. This plan is particularly advantageous where the season of manufacture is of short duration and where changes are quite marked from year to year, as in the case of radio and automotive manufacturing. Here the season is too short to spend a lot of effort in setting time study standards. The accumulation of records allows the setting of reasonable standards and the form of wage payment prevents wages from getting out of line under these conditions. This plan is also a transition from pay by the hour to weekly pay.

A wage incentive plan puts a man into business for himself and gives him a full return for every bit of effort exerted. For this reason he will provide his own supervision and there will be a better absorption of overhead. As he is paid much sooner after he completes a week's work, the employee will feel more satisfied with some form of a wage incentive plan the results of which he feels every pay day rather than every several months. This puts him on his toes and he will produce more. The time between cause and effect is shorter and more stimulating.

As the problems of the employee coincide with those of the management, both being interested in quality, waste reduction and greater output, problems of discipline practically disappear. As a result wage incentive plans are true incentives rather than drivers.

All progressive wage incentive plans do not penalize the operator for interruptions beyond his control, but offer a guarantee somewhat approaching his earned rate. A decision handed down by the National Industrial Recovery Board protected the employee from a loss of pay because of interruptions beyond his control and provided for payment during such periods. This feature of a loss of some pay while the worker is on a guaranteed hourly rate due to interruptions outside his control is

not as just as under measured day work for similar conditions.

Piece work that guarantees an hourly rate and is so set up that the employee can earn at least 20 per cent more than on base rate is a form of wage incentive. Its advantages lie in its simplicity, its standard cost per unit of product, and ease of pay computation by the worker. At least 50 per cent of the wage incentive plans in use are of this class. With some of the other wage incentive plans there is a greater difficulty for the worker to compute his earnings and consequently this breeds misunderstanding where there are suspicions of management's motives. An intelligent worker can compute his earnings under one of these plans and if he cannot, he can be educated to do so if the plan is ideal for his and the company's needs.

A wage incentive plan which sets standards in terms of time, and has all the features of measured day work is that which embraces job analysis; maximum and minimum rates of pay, each worker graded within these limits depending upon the factors that management deems fit; avenues of promotion through the worker's production record; ability to change rates with a minimum of resistance to changing conditions; etc., and is without the objectionable feature of a limited income. In times of great change whether in operation or in industrial conditions, the only safe method of pay that can be justified is that based on time standards.

The wage incentive plans that have the standards expressed in terms of pieces are not as equitable to the worker because the older employee receives the same pay as the newer one for the same job, although each receives different guaranteed hourly rates. As to quality, the work is either accepted or rejected and the employee cannot be rewarded in proportion to the quality of his work. There will be a tendency to get quantity at the expense of quality, but this can be held within reasonable limits by the various checks mentioned under wage incentives. At the time the standards are set, a fair rate is put into effect for business conditions, etc., existing at that time. When conditions change upward it is easy to go with them, but when conditions change downward it is harder to lower without hard feelings. Don't think that the employee forgets this when things come back to normal. The worker's value to the company can be deduced from his earnings record, attendance record, and from the opinion of his supervisor when a question of promotion comes up. With both measured day work and wage incentive the foreman's opinion is relied on as to the man's versatility and the quality of his work,



but with the keeping of records of production, earnings, attendance, and waste, the foreman's opinion can be supplemented to prevent bias.

Men who work under wage incentives on the same job week in and week out will receive a fairly uniform check each week as with measured day work, but if jobs are changed several times within the week workers will get fluctuating pay checks. The degree of fluctuation will depend upon the man's versatility, skill, and the uniformity of job standards.

A system of measured day work presupposes an accumulation of data as to conveyor speeds and maximum output of machine tools, and therefore measured day work wages depend upon how alert the worker is, the quality of his work, etc. The maximum output might be influenced by the limitations of the machine which might result in holding the employe back. With an operation where the output is primarily up to the

man there is varying output depending on the employe. Under the latter conditions it is prudent to use some form of wage incentive which will induce the operator to put forth his best and be compensated accordingly. Wage Incentives can be used under all conditions that will lend themselves to incentive wage payment be it hand work, machine work, or a combination of both.

The cost of both types of wage plans is about the same. Measured day work requires greater supervision on the part of management while wage incentives require a greater efficiency on the part of labor and consequently less supervision. Either plan gives a measurement of management, a measurement of labor and a wage payment plan. Under either plan the foreman may receive a bonus based on his workers' efficiency. Measured day work is a step removed from wage incentives as far as earnings are concerned and it is a change from hourly to weekly pay.

#### Developing Leaders Through the Conference Method

(Continued from page 47)

be to collect a band of colleagues, not to institute a hierarchy of officials.

The whole industrial structure must be permeated with the ideal of freedom of opportunity for the individual to discover, train, and apply his individual tastes, interests and capacities. *We need, therefore, leaders who are educated and trained to think and act historically, to think and act scientifically, to think and act*

*socially, and, above all, to think and act in terms of the capacities of their co-workers.* May we not dare to hope that a major product of the New Deal philosophy and experimentation will be a sounder employer-employe relations policy, of a permanent character, embodying scientific and just selection, placing, motivating, rewarding and participation of the entire personnel—in a word, *responsibility commensurate with power* in industrial human relationships?

# Measured Day Work vs. Wage Incentives<sup>1</sup>

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## The Primary Difference

IN COMPARING two viewpoints, it is best to make certain that the fundamental difference between them is thoroughly understood.

Measured Day Work and Wage Incentives are both methods for the payment of labor in return for daily work at given tasks. The former, while interested in the efficiency at which the work is done, also considers the fact that the worker may have other impulses and desires that should find expression in the job. In return for traits such as versatility, dependability, punctuality, and of course productivity, the worker receives a salary which is guaranteed for a certain period of time, and which is adjusted according to the showing that has been made by the worker in the above points.

As opposed to this, the Wage Incentives system is based solely on the productivity of a worker, with the limiting factor of quality.

## The Significance of the Problem

When it is realized that there are over twelve million people in the United States whose income might be regulated by one of these two methods, and that the buying power of this group is of fundamental importance to the economic welfare of the country, the question of the relative merits of Measured Day Work and Wage Incentives becomes a problem of real significance.

There has always been conflict and misunderstanding between capital and labor, and it is not surprising to find today that this friction is very much in evidence, and perhaps even fostered by certain influences. But today we find industry not run by a compromise between the desires of capital and labor, but by a new system, the management system. This phenomena is just as significant as the factory system which emerged out of the domestic system of industry.

The management system attempts to "justify the ways

*This is the essay which won honorable mention in the contest on "Measured Day Work vs. Wage Incentives" held recently by The Society for the Advancement of Management.*

of capital to labor," based on experience and with a scientific approach, at the same time making any venture profitable for all concerned. The question then of Measured Day Work versus Wage Incentives

must be studied and solved by management, not only as a problem in itself, but also as a problem whose solution affects the economic, political and social welfare of the entire country.

## Betterment of the Laboring Class

The last half century has witnessed a marked improvement in the status of the working class. The first law limiting the hours of work for children was passed by Massachusetts in 1866. Other legislation soon followed, being enacted by both the states and federal governments, until today we have well defined laws on the ages and hours of work, compensation, old age pensions and unemployment.

Then there are many things that progressive companies are doing like the encouragement of credit unions and other saving plans, housing and group insurance, all of which are of definite benefit to the laboring class.

It is interesting to note that many of these measures, such as the workman's compensation act, were bitterly opposed when they were first introduced. Now industry would not be without them. Even the work of Filene for the betterment of his employes was criticized, but the later success of his attempts, notably the Credit Unions, justified his action.

The conditions under which the average person has to work have also undergone marked changes for the better. The modern factory is a cross-section in the latest developments in lighting, heating and ventilation and even with air conditioning in some instances.

The hazards attached to many jobs have been greatly reduced. The various safety devices almost altogether eliminate the chance of accident, except due to negligence on the part of an operator.

The responsibility attached to the average job is almost at a minimum, the operator need only be con-

<sup>1</sup> Paper presented at the Annual Conference of The Society for the Advancement of Management, New York, December 10, 1937.

cerned with the work that is immediately before him, and oftentimes methods are introduced that will make the work less fatiguing.

### The Labor Picture

The first attempt to organize all labor in this country was made by Uriah Stevens, a garment cutter of Philadelphia, in the early 1870's. His union, the Knights of Labor, had almost the same platform as that of an organization that is prominent today.

The so-called new weapon of labor, the "sit-down strike," although not known by that catch-phrase, was the exact procedure followed by the strikers of the Carnegie Steel Company at Homestead in 1892. It is significant too, to note that the strikers successfully resisted the attempt of several hundred Pinkertons to dislodge them, and it was not until a formidable array of state militia arrived at the scene that they left the plant.

From these events it seems that labor history is like any other history, and will repeat itself. Perhaps that justifies the attitude of management in the past, as far as their direct labor problems are concerned, which was one of indifference. Management has been apt to let the cycles of labor unrest run their course, and to accept the mandates of social legislation, devoting its energy to the problems over which it had definite control.

These have been the general problems of industrial management and it is only right that the development of these problems be reviewed.

### What Management Has Done

It has often been said that the development of a subject is the lengthened shadow of the pioneer who fathered the original idea. This applies precisely to the growth of time study and scientific management, which was fathered by Frederick W. Taylor.

He believed that the one best way of doing a job should be found before the job was studied for the purpose of setting a rate, and he believed in the functional duties of the foreman and other shop executives, two thoughts which are very much in evidence today in our modern practice of production control.

His work was nobly carried on and expanded to meet specific cases, by such men as Gantt, Emerson and Barth. Bedaux introduced a new idea with his "point plan" for measurement of work, as did the Gilbreths with their "therbligs" and laws of motion economy.

It is interesting to note that in all of the systems of wage incentives that were developed, the incentive for the worker was based on increasing his daily output. It is only fair to assume that the industrial engineers who developed the various systems were following the demands of management at that time.

It was not realized nor accepted that human labor could actually be measured until quite some time after Taylor conducted his historic experiments with the handlers of pig iron at the Bethlehem Steel Company. So it is not surprising that the only incentive that was used to increase the productivity of the worker, would be one of paying him only for his extra effort. The time was not ripe for any other methods, such as measured day work, and it was not until the spring of 1934, that a condition existed that called for some other plan.

### The Turning Point

This condition was caused by the introduction of the conveyor system of assembly which found its greatest usefulness in the automotive industries where the assembly of the product plays such an important part.

At this time workers on the assembly lines complained about the irregularity of their pay. At the beginning of the season, when new models were introduced, it was impossible to meet the required daily production figures that had to be obtained in order to receive a bonus. Then as the season went on and the "bugs were ironed out" production naturally increased and the bonus was earned. Practice would soon make perfect and toward the end of the season the production would climb still higher, the pay envelope would become abnormal and all would be fine until the plant closed down for preparation of new models. Then of course all income would stop and the same vicious cycle start over again with the next season.

Some imaginative person suggested paying the workers on the assembly line a salary based on the average income that should be earned during the season. Management balked at first because the basic principle of wage incentives would be altered, but fortunately, an experiment was conducted, and to everyone's surprise the overall efficiency of that assembly line was comparable to other lines working under the old system.

It is not surprising that such a change should come from so devilish a tool of modern management as the conveyor. With the conveyor, management, besides setting the number of cars to be turned out in a day's time, could actually regulate the speed at which the



men worked, so that the desired production could be obtained. This gives splendid production control, but reduces a worker to the state of being almost a robot.

#### Measured Day Work Appears

This new method of payment has been greatly developed since its introduction and today is commonly known by the term Measured Day Work. A definition by Rositzke covers the accepted meaning—"Measured Day Work provides a balanced plan of rating a worker's value by considering four factors. It fixes hourly wage rates by setting uniform base rates by jobs and giving added inducements determined separately for each employe on the basis of his productivity, quality service, dependability and versatility, all measured over a relatively long period."

The worker is paid a straight hourly rate, based on the above points, and this rate is guaranteed by the company for a certain period of time, usually anywhere from one to three months. At the end of this period the worker is rerated, depending upon his showing, and is then given a new rate which is to be effective for the coming period. The part of the new hourly wage that depends on the showing in the various inducements is changed, either up or down, according to the performance in these points; the base rate remains the same unless the worker is shifted to a new type of job. The practice of setting base rates is well understood by management and need not be discussed here.

Measured Day Work has received much criticism by many executives, and it is not thoroughly understood as yet by the public or workers. Much of the adverse criticism has been due to inertia; many claim that discarding piece rates is a step backward, but such an attitude clearly shows that the possibilities of the new plan have not been thoroughly understood. There are some who believe that adopting Measured Day Work is the expedient thing to do in the face of the present labor unrest, and it is a step forward in a direction that is not possible under a Wage Incentive System.

#### The Possibilities

Measured Day Work affords the individual worker a chance to show more interest and self expression in his work. The maxim that you get what you pay for applies to a company with its employes, and if an employe is supposed only to produce, he will certainly consider himself a machine, producing only and not caring for

the other features that might be developed in his daily industrial existence. Any industry is much better off if its workers take pride in the plant and in such matters as co-operating with the planning and time clerks, giving more respect to tools and fixtures, and striving to see that others do their jobs better.

The employe could even be rewarded for trying to improve himself along educational lines. There is no doubt that education is a wise investment of time and money, but the returns are slow in coming, in fact, so slow that many are discouraged to start. It is not at all illogical that management should show its appreciation of a worker's attending night school, for example, by giving him a better rating. In the long run management will benefit almost as much as the individual, by having trained executives. A company will advance only as far as its executives can cope with new problems.

The worker is not able to budget his income with the variations in amounts that are found in Wage Incentive Systems. This has definite effects upon his family life, not to mention the butcher, the baker, and others. A steady income, and regular employment, year in and year out, is much to be desired.

Measured Day Work tends to raise the standing of a foreman to that of an executive. A foreman under this system must have a greater knowledge of his workers, and he must know how to inspire each one so as to draw out the various characteristics that were mentioned above. The responsibilities of a foreman will certainly increase, and some doubt the ability of a foreman to face the new problems, but the very fact that a man has been raised to the level of a leader shows that he is capable and willing to accept new duties.

Of course aid will have to be given to the foreman. Personal prejudice and guess-work will have to be eliminated as far as possible in the rating of the workers. Records such as efficiency and quality will be easy to obtain from daily labor tickets or production cards. Time cards show attendance and punctuality, and suggestions can be considered by actual count and savings. Versatility is a function of efficiency on several jobs, and dependability can likewise be measured.

Other men such as the employment manager and supervisors can be asked for their opinions so that an employe's rating on the four basic and other points can be made more than a temporary whim of the foreman.

The responsibility attached to Measured Day Work offers a greater problem to management. Workers will always have to be supplied with work, for if they have nothing to do, through no fault of their own, they will

be paid their hourly rate, and not a low day rate. This means that production control systems will have to be tuned to a high level of efficiency. This is the desire of any company, but if it is not done now the penalty will be greater than it ever was before.

The extra cost of rerating employes and revising hourly rates at the start of new periods will be offset by the elimination of work necessary to adjust shortage complaints, not to mention the elimination of ill feelings on the part of the employes. Standard costs will be determined and kept the same way, which means the necessity of continuing time and motion study work. It will be easier to install new methods and very much easier to install a system of standard costs and manufacturing methods in a plant where no work of this type has ever been done before. Inspection operations could be time studied and standards set in cases where it was not feasible before.

The real problem that management faces is being able to predict and control sales in such a manner that they will be able to live up to the promises they make their employes. It is all very well to be enthusiastic about guaranteeing rates now, the acid test will come when business materially slackens for everyone. Forecasting is now a science and many firms have been able to so plan their yearly activities that they can give steady employment the year round.

Measured Day Work has been shown to be a valuable plan in the automobile industries and in such a progressive firm as the International Business Machines Company. The American Hard Rubber Company has used it on their inspection operations. The Nunn-Busch Shoe Company has made a heroic start in favor of Measured Day Work by guaranteeing their employes a pay check for every week in the year.

These firms have shown that Measured Day Work meets the two fundamental requirements in which industry is always interested. The new method of payment will pay for itself and the good that has been done by the past method will not be lost.

#### The Challenge to Management

It has been shown that the significance of the problem lies in the misunderstanding by labor of the needs of capital, and that while the betterment of the laboring class is forever going on, it is still a collection of individual human beings.

Management, the steward of industry, has done much in developing the tools by which it works, and has for-

gotten in the remarkable progress that has been made that a worker is still a human being, and will respond to inducements based on human characteristics inside the plant as well as outside.

The needs of industry have outgrown the possibilities that Wage Incentive Systems have to offer. Measured Day Work carries on the principles of Taylor, adapting them to the changing conditions of modern times, and giving management a definite responsibility, that it rightly deserves, in regulating the economic and social life of the country for the common good.

Measured Day Work is a challenge to management!

#### Discussion of Executive Responsibility

(Continued from page 33)

been worked out in the General Motors Export Company, Mr. Smith speaks with authority deriving from broad and varied experience in studying the problems of a far-flung organization whose operations embrace the entire world within their scope. He reinforces, on the strength of such experience, the principles and points of view which were contained in his paper of several years ago.<sup>3</sup> On this occasion, however, he contributes something of additional value to our thought, by pointing out and emphasizing the validity of one aspect of the staff principle which, as he correctly states, has not previously been given the consideration and definition it deserves. In explanation, he states that there is a kind of staff service "which stands in sharp contrast to the operational staffs in the sense that the whole nature of the responsibility involved is a service not only to the line but also to the staff itself." He cites as examples of this staff service, the functions of "public relations, trade association liaison, government contact, employe relations, organization co-ordination, and economic research."

Mr. Smith deprecates the fact that executives are apt to be "pleasantly scornful" of these functions and to regard them as "supernumerary." He expresses the belief that for their pursuit adequate staff co-ordination is seldom provided. While these are rather sweeping statements, I am of the opinion that, on the whole, they are in accord with existing practice. My own theory with respect to the cause for this condition suggests that it is primarily founded in the fact that there are two kinds of authority, the authority of position and the authority of knowledge, and that line executives are

<sup>3</sup> Edgar W. Smith: *Organization and Operating Principles*, American Management Association, General Management Series: No. 112, New York, 1930.

often not able to understand, or willing to grant, that both are rarely to be found combined in one and the same individual. If more executives were in possession of both kinds of knowledge, it is possible that there would be less need than exists today for the development of the particular staff functions to which Mr. Smith has alluded. In this connection, let me add that I am not so disinclined as Mr. Smith appears to be, to permit a line executive to go to the extreme of assuming a direct and personal responsibility for the performance of what he terms "administrative staff services." At the risk of advocating a fault in organization, I suggest that essential co-ordination may sometimes be achieved better in this manner than by other means.

I cannot conclude without reverting to Dr. Dimock's paper, for the purpose of commending the excellent summary with which he has provided us and the comprehensive references to source materials which the paper contains. Both features, aside from being exceedingly helpful to the student, betoken the habits and techniques of scholarship. If more such papers as Dr. Dimock's and Mr. Smith's were presented at management meetings, one would most certainly be entitled to conclude that practitioners of the art, assuming that they heeded and applied to their problems the authoritative directives these papers contain, would make more rapid strides toward its mastery than appear likely under present circumstances of relative illiteracy in the domain of management.

### REVIEWS

*Scientific Management in Great Britain: A Survey by the 36th Oxford Management Conference.* Published by Management Journals, Ltd., London, 1937, pages IV, 230. (5/6)

This issue in book format of Vol. II, No. 3 of the *British Management Review* is the record of a conference at Oxford in April, 1937; a meeting of over 200 industrial executives and administrators who worked in research groups with the purpose of exploring the availability of British papers on scientific management for presentation at the Seventh International Management Congress to be held in Washington in 1938. The conference reviewed the progress of management in Great Britain in the fields of administration, distribution, personnel, production, and the social-economic significance of scientific management.

This volume does not present to readers in the United States anything new in the nature of principles and technique, but it is significant to them on several counts: as an example of a realistic and effective method of surveying the field for selection of papers for a world congress; as an indication of the status

of the management movement in Great Britain and of the fact that the more progressive managements in that country are on a par with those in the United States in application of scientific management principles; and as a record of incidental statements of points of view or facts which readers in the United States might profitably ponder over.

In respect of this latter count a paper on labor relationships in the retail trade is interesting. It brought out the point—which may startle many employers in the United States, but is proof of common sense born of long experience—that a British ministry is averse to enactment of legislation governing wages, hours, age limits, and other conditions of employment in an industry in response to representations of employers only, but demands prior progress in voluntary agreements between employers' associations and unions; an attitude based on the assumption that representation of an industry or self-government in an industry is genuine only when labor through organization is recognized as equal in functional importance to owners and employers, and equally concerned with governance of the industry.

The report begins with an excellent discussion of the management movement and of scientific management by Major Urwick, although this leading paper has one serious omission to be noted later. The record continues with stimulating discussions of the social and economic aspects of management (Clifton Robbins) and management's wider responsibilities (Hugh Quigley). Near the end of the book is an excellent article on recent developments in the technique of production planning (A. P. Young), a notable example of scientific management control technique. Nowhere, however, is there adequate discussion of the techniques of research on which scientific management is based, the extent to which these are utilized in the various functional areas of management, and especially the manner in which results of research are translated into procedures of management. Even Major Urwick in the opening papers appears to be satisfied with an explanation of scientific management as management based on research, and does not present principles through which research controls action. It must be recognized that all the control mechanisms of scientific management may be set up and yet there will not be scientific management if the control is not in terms of research-determined standards. The heart of a planning room is the data files, not the miscellany of procedures. Also this volume is evidence, as in the case of similar volumes published in the United States, that the run of discussors use the term scientific management without knowing what it really means. By H. S. PERSON, Consultant in Business Economics and Management, New York.

*Manual on Research and Reports.* By the Committee on Research of the Amos Tuck School of Administration and Finance, Dartmouth College, McGraw-Hill Book Company, Inc., New York and London, 1937, pages x, 140. (\$1.25)

According to its preface, this little book is "an extended revision" of the manual of the same name published by the Tuck School in 1931 (Williams and Wilkins Company, Baltimore).



Comparison of the two editions reveals that the only essential difference is the addition to the later edition, as the final chapter, of a section entitled, "Submission to a Printer or Publisher." The chapter consists largely of quotations from a booklet of the McGraw-Hill Company, Inc., entitled "Suggestions to McGraw-Hill Authors." It deals with the mechanical aspects of preparing copy for publication and touches on the relations between author and publisher. Aside from this addition, the only new material in the edition is supplied by a few bibliographical and other references to bring it up to date. The appendices of the earlier edition, which deal with guides and sources of information, and statistical work of the U. S. Government and of the States, have now been incorporated in the text of Chapters I and II.

As stated in the review of the first edition published in the February, 1931 issue of the *Bulletin of the Taylor Society*, the book is of great value to all who are concerned with the making of investigations and writing of reports. It touches briefly on every aspect of such work, from defining the problem to making author's corrections on the proof, and gives many practical suggestions for procedure at all stages of the progress of the research project.

In the second edition, the authors give evidence of having heeded their own advice by making the text much more readable through the use of varied type, improved arrangement and, particularly, better paragraphing. The style has also been simplified. By RITA H. HOPF, Hopf, Kent, Willard and Company, Management Engineers and Accountants, New York and Boston.

*Organization and Management in Industry and Business.* By William B. Cornell, The Ronald Press Company, New York, 1936, pages xxiii, 802. (\$4.50)

While advertised as a revision of the author's well-known "Industrial Organization and Management," this is in many ways a completely new book. This reviewer believes that the new book is a great improvement on the old, both from the viewpoint of the order in which the several topics are discussed and in the amount of space allotted to the various topics. The author has been successful in his attempt to introduce the most recent developments in the field of management.

The material is in three parts. Part I consists of twenty-four chapters and 585 pages, and is a general discussion of the organization and operation of an industrial enterprise. This is an excellent general survey of the most important industrial problems. The first ten chapters discuss such topics as the economic background of industry, types and principles of organization, management and executives. There are also analyses of such important factors of the industrial problem as product, equipment, buildings, plant location, labor, financing the enterprise, etc. Next are ten chapters which begin with a discussion of company organization and continue with a separate discussion of various departments and divisions of a typical industrial organization. Part I closes with four chapters on personnel management, wage systems and incentives, and budgets.

Part II consists of six chapters and 131 pages, and is an excellent discussion of the various factors involved in production control such as tool storage and control, routing, scheduling, dispatching and time study.

Part III consists of three chapters and 62 pages, and contains three excellent illustrations from actual practice; layout and arrangement of a textile mill and two illustrations of dispatching.

The book is well illustrated, with 173 photographs, charts and sample forms. It contains a well-selected bibliography of over a hundred books, divided among some fourteen principal management topics, and is well indexed. The author's engineering education and actual experience in industry, plus many years as a consultant in industrial management and as a teacher of industrial management subjects, have enabled him to produce a book which is sound from the standpoint of fundamentals and which in a single volume discusses acceptably all of the major problems of industrial management.

This book is definitely a discussion of organization and management and, unlike so many other books in this general field, makes no attempt to discuss problems in such fields as accounting and engineering economy. It seems to this reviewer that this is a great advantage, and it is one of the reasons why he has selected this book as a text for his students in industrial engineering, who take separate courses in accounting and engineering economy. The book devotes rather more attention to problems in the actual control of production than is true of some other books in this field, but this also seems desirable in view of the importance of this phase of industrial management.

This book is a fine text for a general course in industrial management for students in engineering and in business administration. It is also an excellent reference book for industrial executives and for those young men who are now getting practical experience in some part of an industrial organization and who will be the industrial executives of the future. The book is so well written that every ambitious man in industry should find it of interest, from the beginner with no technical training or experience to the top executive of many years of industrial experience. By PAUL T. NORTON, JR., Professor of Industrial Engineering, Virginia Polytechnic Institute, Blacksburg, Virginia.

*Public Personnel Administration.* By William E. Mosher and J. Donald Kingsley, Harper & Brothers Publishers, New York and London, 1936, pages xiii, 588. (\$5.00.)

This excellent volume is the first comprehensive statement of the modern approach to public personnel administration I have seen. As stated in their introduction, the authors' method is to "review past methods and critically examine those now in use by various government employers; call attention to those constructive policies that have been initiated or adopted by public authorities both here and abroad; and expand upon such others as are accepted as standard by the leading personnel managers

in private enterprise, with special reference to their applicability to the conditions of public employment." (page xiii)

It is the latter element of the book which will particularly interest readers of this Journal: the authors' recognition that "All of the problems of personnel administration today, whether in the public or the private spheres, are conditioned by the fact of bureaucratic organization"; (page 9) and that the vital role of the personnel manager in public as well as private life is the creation of a situation which will invoke loyalty, and release creative impulses. (page 52) They acknowledge the influence of Metcalf and Tead in this approach—and of Charles A. Beard.

The authors discuss the problems from recruitment to superannuation, from mental testing to unionism, from classification to public relations, with full reference to the best practices in private as well as public employment. They would be the first to admit that no public personnel agency yet carries out fully their ideal program (I suspect that few private enterprises do so); but the picture they paint of the beginnings of a creative and dynamic personnel program in federal, state and local administration will surprise those who still think in terms of "civil service" as an inflexible and archaic mechanism to "keep the rascals out," suited only to recruiting clerks for routine and repetitive tasks.

Fortunately, too, the authors' insistence that the "independent," "bi-partisan" civil service commission must give way to the responsible personnel administrator finds its reflection in the recent laws establishing the merit system in Arkansas, Connecticut, Maine, Michigan, Tennessee—the largest crop of enabling laws in two decades. By CHARLES S. ASCHER, Secretary, Committee on Public Administration, Social Science Research Council, New York.

*Personnel Practices Governing Factory and Office Administration.* By F. Beatrice Brower. Published by the National Industrial Conference Board, Inc., New York, 1937, pages xii, 134.

To anyone interested in discovering the prevailing practice in a number of companies in such matters as rules and regulations governing hours of work and attendance, employment and payroll procedures, payment for absence from work, discharge and resignation procedures, will find a handy set of tabulations in this handbook of company practices published by the National Industrial Conference Board, Inc.

It is not an exposition of *approved* methods or a description of necessarily ideal procedure. It simply presents prevailing practices in dealing with many questions that inevitably arrive in connection with the administration of a factory or an office.

Eight hundred sixty-five companies with a total employment of 1,519,587 employees reported. Material is presented in a number of tables which makes for easy reference.

The material is interestingly summarized in the beginning of each chapter. By EVELYN BUCKLEY.

*National Income and Its Elements.* By Robert F. Martin, National Industrial Conference Board, Inc., New York City, 1936, pages xiii, 134. (\$2.50)

"National Income and Its Elements" is a concise and compact handbook. The period treated is from 1929 to 1934. Elements considered in arriving at national income are salaries, wages, profits of individual entrepreneurs, interest, dividends and net rent. These comprise nine-tenths of the national income, while other items included are pensions, workmen's compensation benefits, relief, both public and private, and governmental benefits to farmers.

The estimates strive to give "realized" income on a cash basis, and therefore do not include irregular bonuses, profits or losses from the sale of property, or changes in the value of corporation assets.

The finest feature of the book is its many excellent tables and charts which reveal vividly the types and sources of income, with little need for explanatory comment.

According to the national income summary, the total accountable realized income for the United States was eighty billions of dollars in 1929 and 44.6 billions in 1933—a decline of 45 per cent for the period.

Chart 2 shows the decline by industries, with construction falling most and communication falling least.

Chart XI gives the realized income by states for the years 1929 and 1933, arranged in order of rank. The areas suffering the least percentile decline were the District of Columbia, North Carolina and South Carolina. The states hardest hit were North Dakota, South Dakota and Michigan.

One fundamental difficulty is inherent in any attempt to reduce national income to a monetary basis. This was recognized by the authors when they came to the income paid to farmers by the government for crop and livestock reduction. Their *method* of computation compelled them to register these receipts as increased national income, yet their *reason* told them that national income could not be greater if the nation was made poorer by possessing fewer goods. The authors grudgingly counted this as an increase in income even though their judgment rebelled.

Lord Lauderdale of England in his "Nature and Origin of Public Wealth," over a hundred years ago severely criticized Adam Smith's "Wealth of Nations," because Smith thought that the wealth of a nation was made up of the aggregates of the individuals composing the nation. The same problem was presented by Cournot when he dealt with two springs of mineral water. When the two springs were separately owned and allowed to run freely, there was water for all and it was a free good, but when the two owners united to form a monopoly and cut the water supply available in half, they were able to charge a price and receive a substantial individual income. Here is a case where it is obvious that the community income fell as individual incomes rose. No statistician or accountant has yet succeeded in presenting a proper solution to this paradox between aggregate individual income in dollars and national income in goods or public welfare. Mr. Martin, of the "National Welfare Conference Board," is still groping in the dark with respect to this question. By H. L. McCracken, Professor of Economics, Louisiana State University.